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in the news

INSIDE

Three magicians (plus one lovely assistant) dazzled and mystified a Kresge audience with numerous tricks and sleight-of-hand.

p6

The women's varsity fencing team split two meets last weekend against SMU and Dartmouth.

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EXCERPTS

After much debate in Washington among House and Senate conferees, Congress is putting the finishing touches on the new energy bill. The compromise legislation will have far-reaching effects on the American way of life, according to reliable Congressional sources who are visiting here during the holiday recess.

The bill would do the following:

Outlaw rolling friction

This is one of several measures intended to reduce the gasoline consumption of wheeled vehicles. The House-Senate conference committee considered outlawing all friction until it was pointed out that such a move would make stopping rather difficult.

Require mandatory personal insulation

Local service stations will be required to provide low-interest loans to individuals desiring to have their blood streams weatherized, thus preventing frostbite during winter and heat prostration during summer months, without need for heat or air conditioning in homes and places of work. All infants born after July 1, 1980 will be required to be so weatherized at birth. This is considered a temporary measure until a cold-blooded human can be developed under programs to be sponsored by the National Science Foundation.

Provide a tax credit for sleep

For every hour beyond eight that an adult wage earner sleeps, he will receive credit on his federal income tax. The tax credit will be a graduated one, being greater for light sleepers and less for heavy ones. "Sleep is darkness," an Administration spokesman explained, "and darkness keeps the lights out."

Admit the OPEC nations to statehood

This move will immediately reduce our dependence on foreign oil and make the United States energy-independent.

—The New York Times

BU exposure sues administration

By Jordana Hollander

The staff of the *BU exposure* has filed suit against Boston University's President and the Board of Trustees, charging them with violating the students' constitutional and contractual rights by attempting to exercise prior review over the publication.

The Civil Liberties Union of Massachusetts' volunteer attorney Michael Posner filed the complaint in Suffolk County Superior Court Monday morning for the student group. The suit named President John Silber, Dean of Student Life Johan A. Madson, and the Board of Trustees as the defendants.

Posner stated that the suit rose out of the treatment of the paper

by the BU administration. As examples of the alleged harassment Posner pointed out that close to \$6000 of allocated funds have been frozen by the university and that the paper's faculty advisor, Professor of Political Science Howard Zinn was asked to review the paper prior to publication and prevent the printing of "objectionable" material.

Teri Taylor, a staff member of the *exposure* and one of the plaintiffs in the suit, was more vehement in her condemnation of the BU administration. She accused it of conspiring to repress the campus papers and cited previous victims of harassment such as the *BU News*, radio station WBUR-1M, the 1976-77 Yearbook, and the Student Union.

Taylor said that if the university continued with its present negative attitude toward criticism, it would be "committing educational suicide." She added that for a "meaningful education," free exchange of ideas was essential.

According to Taylor, the *exposure* turned to legal action only after trying all other avenues. Even "petition signatures, the approval of the student Allocation Advisory Board, active community support, and the support of the BU Chapter of the American Association of University Professors (AAUP)" have failed to alter administration actions, she noted.

The BU Chapter of the AAUP

had passed a resolution in early December condemning the administration's efforts to control the campus media by instituting a faculty advisor responsible for reviewing material prior to publication. It pointed out that the action taken against the *exposure* was part of a pattern of repression of free expression and of criticism of the administration or Silber.

Zinn said he felt that the suit's filing was an historic occasion, being the first direct legal action against a university aimed at defending the students' first amendment rights, even though they express views critical of the administration.

He called Silber's actions "part of a process that has been in motion for several years," using intimidation to stifle student and faculty criticism. The result, according to Zinn, is the control of BU by "a small elite" and a "dictatorship" by Silber. This control, with its "atmosphere of fear and restraint," may not be "uncommon in a corporation or company," but is especially "reprehensible" in a university, stated Zinn.

She also noted that Silber will not meet with any of the *exposure* staff. "He refuses to have anything to do with the *exposure* except name-calling," said Taylor.

Zinn continued, saying that the suit filed had "ramifications beyond the specific incidence" and involved an important point concerning academic freedom.

The preliminary hearing for the complaint will be held in two weeks. Posner stated that he felt certain of prompt relief with the arrest in the trial of the release of the facts held by the university and ending interference with the students' first amendment rights.



These four residents of Baker House are seeded entrants in the Second National Association for Computing Machinery Student Programming Championship Contest. FOOD BARN is a corrupt collection of the past year's student work. (Photo by John Grunfeldt)

Four Bakerites win programming contest

By Steve Kirsch

A team of four computer science majors from Baker House won the Northeast Student Programming Contest held last Saturday at Rensselaer Polytechnic Institute (RPI). By finishing first in a field of nine teams, the group became a seeded entry for the Second National Association for Computing Machinery (ACM) Student Programming Championship to be held in conjunction with the 1978 ACM Computer Science

Conference in Detroit on Feb. 23 and 24.

The Federman '80 organized the group of Larry DeMar '79, Curt Sanford '80, and Dan D'Eramo '80. "He just asked if we wanted to be in it, and we just went along," D'Eramo said. Because no one in the group had a car, they each shelled out \$15 to rent a car to get to RPI in Troy, New York.

The object of the contest is to solve four computer programming problems as fast as possible

using ANSIFORTRAN. All four problems are given to each team at the start of the contest, and the team receives one "problem-minute" for each minute that each problem remains unsolved. The team with the lowest score wins. The teams are allowed only 20 computer runs with no penalty and are given a penalty for a wrong answer.

According to DeMar, the group was well prepared for the contest. "Basically, we spent one night studying for it. None of us

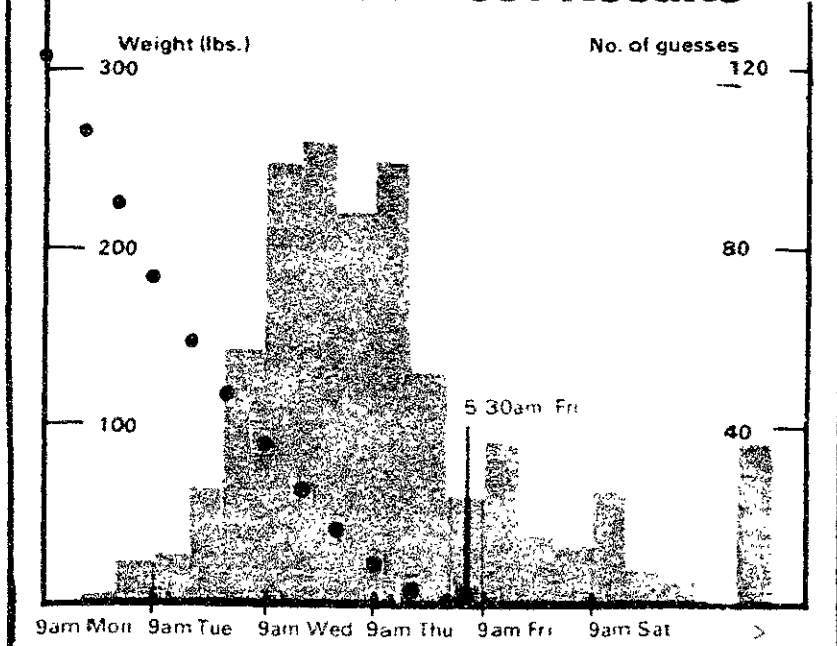
had worked in FORTRAN for a long time."

One team member, Dan D'Eramo, had never written any FORTRAN programs before the contest. Unlike his teammates, he had never been employed as a computer programmer. He learned to program computers from two courses required of computer science majors.

Despite this apparent handicap, D'Eramo was the first person to turn in a correct solu-

(Please turn to page 3)

Ice Block Contest Results



IAP '78 in retrospect

By Richard Cohen

Saturday's performance of the Boston Repertory Ballet Company highlighted a list of over 530 IAP activities offered this January.

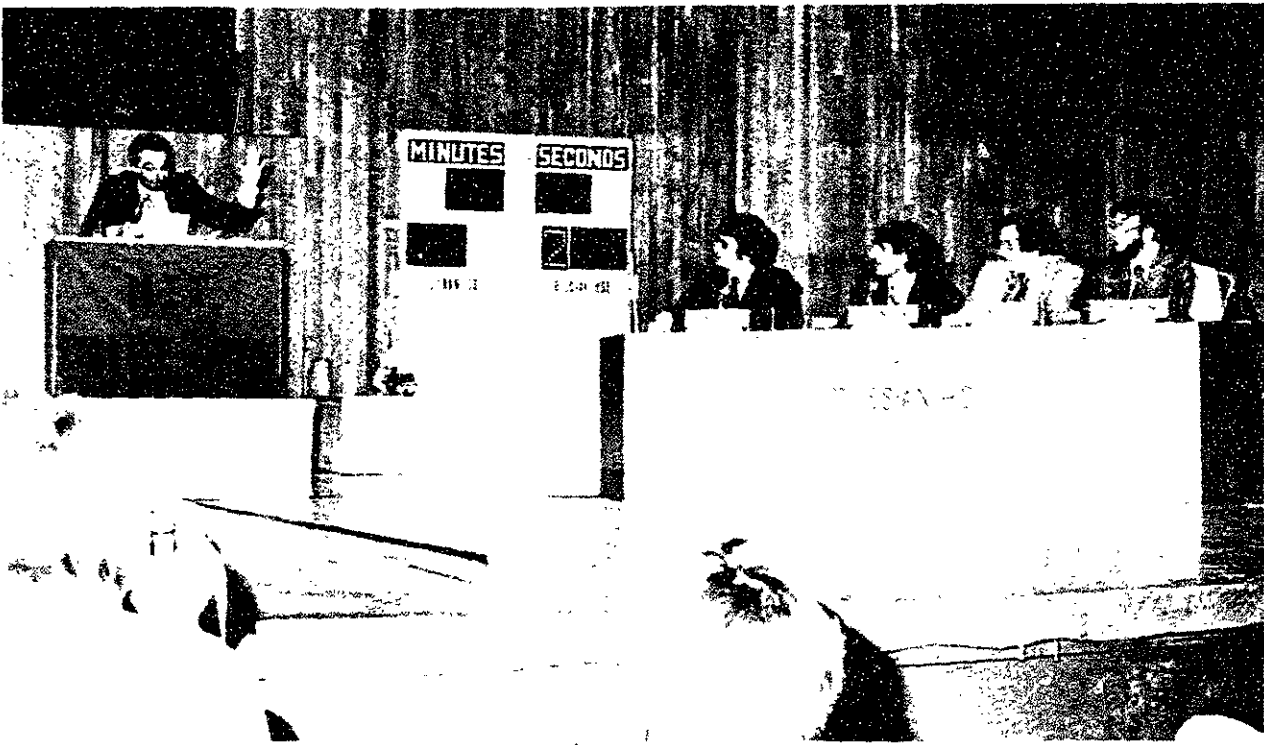
Two graduate students, Mark Gottlieb and Harvie Branscomb, came up with the idea of having the Ballet Company perform at MIT. Many other students and alumni, according to Mary Entline, editor of the *IAP Guide*, supported the idea and worked hard for the success of the performance.

Among this IAP's most popular activities was one nicknamed "IAP Engineering Challenge" which was a contest requiring that a person guess the amount of time

it would take a 300 pound block of ice, placed in Lobby 7, to melt. The ice began to melt at 9am on Monday Jan. 23 and disappeared at 5:30am on Friday, Jan. 27. The winner of the contest was Fred Sims who made the lucky guess 5:34am. He was among 718 people who tried to predict the exact amount of time.

The Chinese Cooking Club, according to Jane Sauer, IAP Office Manager, was so popular in previous years that its registration was full before the first *IAP Guide* was even sent out. Sauer noted that cooking clubs and films tended to be well-attended activities. The Mexican cooking club headed by Mike Melendez

(Please turn to page 10)



Members of the Russian House team listen intently as Ed Diamond gesticulates a bonus question in MIT's College Bowl. (Photo by Douglas Birdwell)

Russians win College Bowl

By George Cann
and Richmond Cohen

In the second MIT College Bowl held a week ago Tuesday night, Russian House soundly defeated Cognoscenti 235 to 85. Previously, Russian House had convincingly defeated Children of Darkness, 335 to 80, in the semi-finals.

The contest was held before a large audience in Kresge Auditorium and was televised on MITV. The College Bowl Company, who had provided the questions for the General Electric Company sponsored television College Bowl, furnished the questions for MIT's miniature replica of the game. For the first time, the Bowl, which is sponsored by the MIT libraries, was open to all members of the MIT community.

The contest began three weeks ago when the individual members of each team took a preliminary exam. Out of the 64 teams who took the exam, the four teams who compiled the highest scores, Russian House, Cognoscenti (a team of Institute employees, three of whom were from the Personnel Office), Baker Croatoan, and Children of Darkness (two members of the MIT debate team and their coaches), went on to the semi-finals. Russian House had the highest score in the preliminary exams, totalling 3965 out of a possible 6720 points. Team captain Brian Clouse '80 had the highest individual score, receiving 1255 points out of 1680.

After their victory, the members of Russian House revealed that they had prepared for the contest by watching many

hours of videotapes of one of their member's high school College Bowl, as well as studying some trivia books.

The questions, however, were not trivia questions. They tested the contestants' general knowledge of a wide diversity of topics, ranging from literature to geography and from religion to physics.

The event's emcee, Ed Diamond, a senior lecturer in Political Science, added a touch of humor to the tension of the contest.

Except for a minor problem with the scoring, the proceeding ran smoothly under the judging of Professor Wesley Harris, Senior Professor Alvin Hibel, and Mary Rowe.

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news roundup

World

Large trade deficit reported — The largest trade deficit in the history of the United States was reported by the Commerce Department. The deficit in 1977 was \$26.7 billion, more than four times the deficit incurred in 1976. Most of the debt was caused by the nation's great dependence upon foreign oil.

Nation

Carter seeks ban — In a Monday press conference President Carter asked the Soviet Union to agree on a treaty with the US which would restrict satellites from carrying nuclear material. This request apparently stems from the crashing of a Russian nuclear satellite over Canada last week.

Criminal law reformed — The United States Senate, in a 72-15 vote, passed massive legislation to consolidate and overhaul the entire body of federal criminal law. The major objective of this legislation is to provide greater uniformity and certainty in punishment.

Canal treaties sent to Senate floor — The Senate Foreign Relations Committee has approved two proposed Panama Canal Treaties by a 14-1 vote and sent them to the Senate floor. The proposals call for the return of the waterway to the Panamanians by the year 2000 although it permits the United States to defend the canal beyond 2000, assures that both American and Panamanian ships have priority in times of emergency, and promises that the United States will not interfere with the internal affairs of Panama.

Local

New Cambridge Mayor — Thomas W. Danehy was elected the next mayor of Cambridge Monday by a 5-4 vote of the Cambridge City Council. Danehy has been a City Councilman for ten years, and was re-elected last November as an Independent. Danehy, a conservative, succeeds Alfred E. Velucci.

Oil exploration delayed — United States Appeals Court Judge Levin H. Campbell let stand an injunction which blocks the auction of offshore oil and gas tracts on the Georges Bank. This decision indefinitely postpones the auction unless oil company lawyers file and win a last minute appeal to the Supreme Court.

Sports

A's keep Blue — Baseball Commissioner Bowie Kuhn refused to approve of Oakland pitcher Vida Blue to the Cincinnati Reds for \$1.75 million and a minor leaguer Monday. Kuhn was consistent with earlier decisions and the \$400,000 ceiling he had set on all baseball trades.

Fast programmers win for MIT

(Continued from page 1)

tion to the problem he had chosen to solve which, according to DeMar, was considered to be one of the hardest. D'Eramo also turned in a solution before any other MIT team member.

The MIT team jumped to a quick start by finishing three of the four problems in under 2½ hours. Due to a misinterpretation of the last problem by one of the team members, the problem was not solved until four hours into the contest. Although other teams had solved all four problems by that time, the MIT team had gained enough of a lead from the first three problems to give them a 28 problem-minute edge over their nearest competitors, a team from Worcester Polytechnic Institute (WPI). A team from RPI finished third, almost two problem-hours after the MIT team. Both WPI and RPI had entered two teams in the contest and had had their own contests to select their teams.

Lederman found out about the contest from a notice in an ACM newsletter. There is an ACM student chapter here; it is essentially the Student Information Processing Board (SIPB). However, no one from that group could be enticed into entering the contest.

"We all felt it was a stupid contest," explained Dan Halbert '78, SIPB chairman. He noted that FORTRAN and encourages a "quick and dirty" solution to the problems, all the people he knows who are good programmers "would not want to be involved in that kind of thing. That's not the way people should write programs."

Keith Smith, editor of *Random Access*, the ACM student chapter newsletter at RPI, disagrees with Halbert. He writes:

"A student who has the ability to program under pressure in a 'quick and dirty' fashion, will most probably have the ability to write a well-structured and documented program. All the people who have entered the con-

test also possess these abilities, at least the contestants from RPI. Contests enhance a programmer's abilities, regardless of how he 'normally' uses them."

The contest, one of the major events of Saturday's RPI-ACM Computer Fair, was jointly sponsored by ACM and Upsilon Pi Epsilon, a national computer

science honor society.

The MIT team now faces the difficult task of financing its trip to the Detroit ACM conference. ACM will pay only the entry fee and hotel costs for the team. DeMar summed up the situation like this: "We are entered. We are in the national contest. We just have to get there."



MIT took on a distinct resemblance to Stonehenge this afternoon at 4:45 p.m. as the sun set down the horizon, leaving the campus in shadow. A substantial crowd gathered to watch the sunset. Many students stayed for the test, which was held in the computer lab. Last year's Sun Day was also held in the computer lab. A crowd gathered around the institute for the sunset. The sunset was a disappointment due to clouds that obscured the sun. Photo by Benoit Marquis courtesy of *Technique*.

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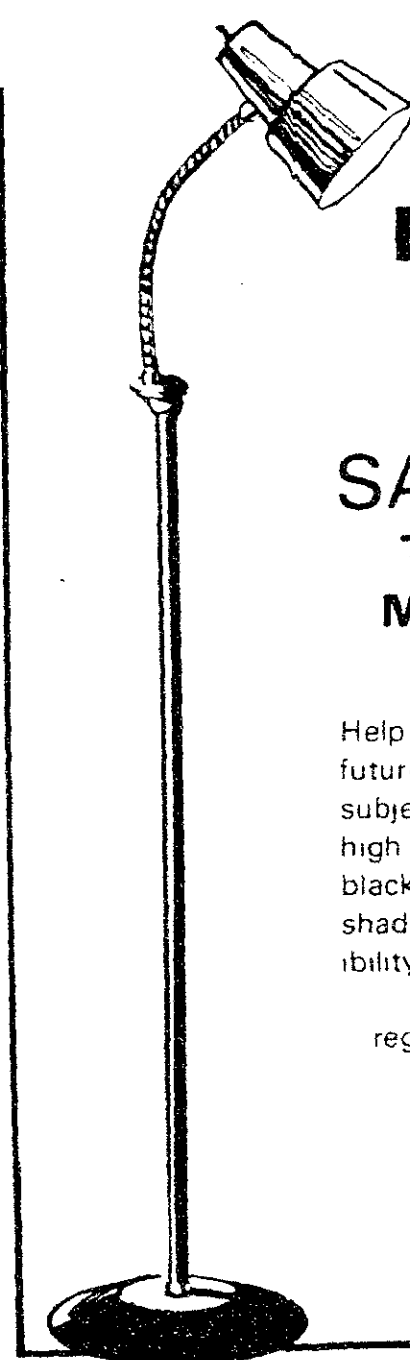
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opinion

MIT's new priorities must be re-examined

By William Lasser

MIT has reached a crucial moment in its history, a time when the basic values and goals which its educational policy espouses must be reconsidered and revised if the institution is to continue to play an important role in American society.

During the past year, I have commented in this space on several seemingly unrelated issues facing the Institute, and *The Tech* has reported on a multitude of news stories which do not seem to be tied together. Yet at the base of all the controversies during 1977 at MIT is the question of this university's *raison d'être* as an academic institution.

We endured two scandals of significance, the *thursday* and Grogg incidents; we faced and still face difficult questions of academic policy: we saw the beginning of what will eventually be a "new college" within the School of Humanities and the effective end of the experimental Writing Program.

All of these stories reveal an institution unsure of its guiding principles. The administration responses to the *thursday* and Grogg situations showed that MIT is undecided as to whether or not to promote freedom of expression. At the same time, the Institute is unwilling to establish procedures beyond the horribly unsatisfactory Committee on Discipline to deal with violations of personal privacy and of the standards of the community, which have never been satisfactorily defined.

The events surrounding the School of Humanities reveal that the role of such subjects in a technologically-oriented curriculum has not been clearly defined, nor has any attempt been made to answer the large scale questions. The role of technology in our society has undeniably changed in the past few decades. Yet MIT has changed its curriculum only piecemeal and haphazardly, ignoring the basic issue: as engineers and scientists continue to assume roles formerly reserved to those whose education was concentrated in the humanities, does MIT have a responsibility to supply a higher level of non-technical education to its students?

The Writing Program story, stripped of all innuendo and personal mudslinging, reduces to the same question. All of those concerned agreed that MIT graduates should have the ability to write well; still, after the smoke has cleared, there is no widespread program to implement this basic policy. Instead, we have a new course in "science writing" which, while it serves an important purpose, is not, as some have asserted, an indication that MIT is pursuing the goal of teaching scientists to write.

After the riots and demonstrations of the late 1960's, the Institute created the Commission on MIT Education which analyzed and reported on several aspects of campus life. The Commission's work has been largely lost in the calm of the seventies, yet the questions it addressed are as important today as they were then. The establishment of the Commission was at least an attempt to deal with the larger issues involved in an MIT education, although in the end its recommendations were largely ignored. Perhaps the time has come for a new Commission on Education, operating under more serene conditions and with the assurance that its conclusions will be respected and its suggestions implemented.

Some have likened MIT to a vocational school which prepares its students to ply a certain trade. That, while distasteful, is in many ways a correct analysis. For past generations of MIT graduates, success in the engineering and science professions required only the expertise MIT was able to impart. But no more. MIT must commit itself to educating men and women who will be able to deal with the complex technological problems of our society.

This requires a new educational credo. In 1644, John Milton characterized a "complete and generous Education" as one which "fits a man to perform justly, skillfully and magnanimously all the offices, both private and public, of peace and war." In 1978 and for the future, that education must include technological skills — that is why MIT is in a perfect position to provide it. But the other skills such an education must supply are obtainable only through humanities and extracurricular activities, and through the free exchange of ideas and values. The establishment of an environment conducive to such activity must be the goal of MIT as it looks towards the future.

(This is the last column of the "here and now" series of William Lasser, Volume 97 Editor-in-Chief.)

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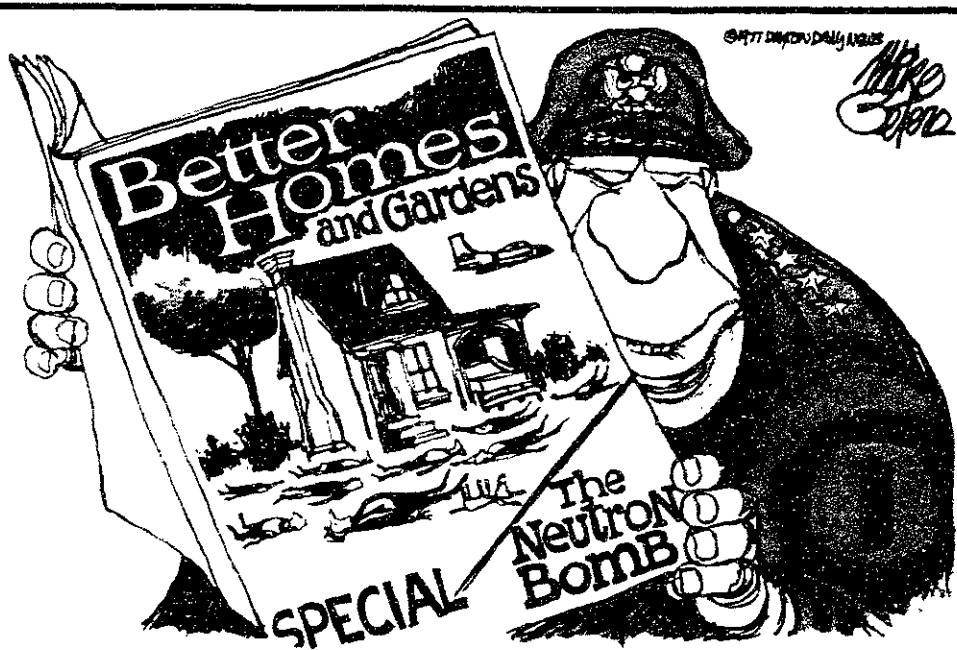
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US wields nuclear axe

By Bob Wasserman

Last week a Soviet military satellite equipped with a nuclear reactor fell out of orbit and landed somewhere in Northern Canada. The nuclear material released upon the satellite's crash could weigh as much as one hundred pounds, and what's more, arms experts believe that there are twenty more US or Russian nuclear satellites in space, all of which must come down eventually.

The Strategic Arms Limitation Talks (SALT) II between the US and the USSR resume this year, and a possible Comprehensive Test Ban Treaty on all nuclear tests might be signed by Great Britain, the US, and the USSR. Before these events take place, perhaps we should examine the thirty-year history of nuclear-

arms proliferation.

After the first atomic bombs were dropped on Nagasaki and Hiroshima, the US entered the Cold War with Russia and proceeded to produce a hydrogen-fusion bomb, almost one hundred times as powerful as

old ones were not simply dismantled and thrown away, therefore most of these bombs are still here today.

Not getting into all the horrible possibilities of a nuclear war, one has to wonder at this ridiculous figure of the Pentagon's toys. What's worse, this seemingly invincible arsenal didn't prevent the US from entering two wars since 1945, and even losing one. After the Vietnam debacle and all the anti-war demonstrations, it might have seemed logical to believe that the military would be completely ignored for a while, but this was not the case. President Carter has increased defense spending in his budget for the 1979 fiscal year, and this amount accounts for more than twenty-five percent of the total national budget.

Nor are nuclear weapons the sole possession of the superpowers, the US and Russia. South Africa is well on its way to developing a nuclear bomb, despite international dissent. Even such a global power as Pakistan has "the bomb," presumably for defense against its neighbor India, which also has nuclear capacities. The military prowess of these two countries creates one of the most frightening sights in the world, for as India and Pakistan have large, expensive nuclear facilities, they also have high illiteracy and widespread famine.

While the rest of the world is content with missiles, the US has looked into the possibility of a new weapon, the Neutron Bomb, which only kills people and does not destroy property. While the controversial decision by President Carter for further study of this weapon took place only last year, this idea is not a new one. Back in 1961 Freeman Dyson wrote in the *Bulletin of the Atomic Scientists*: "neutron bombs, like hydrogen bombs, will in the long run only complicate our lives, increase our insecurity, and possibly facilitate our extermination."

To help understand the reasoning behind the neutron bomb decision and the nuclear arms build-up in the United States, one only has to realize the priorities of the US military establishment. At present research is going on to develop a high-energy laser for military use. However, it is doubtful that this weapon will be used on people, according to a Pentagon official. He explained "I think it would be the type of weapon you would use on a high value target."

I suppose it would be too much to expect for an ICBM missile to suddenly blow up the Pentagon, so in that case I can only hope that world leaders and military officials realize the seriousness of the war games they are playing.

perspectives

the A-Bomb. In the 1950's the US diversified its nuclear arsenal and also compiled a vast nuclear stockpile.

According to Herbert York, writing in *Race to Oblivion* (1970), by 1960 the United States had "the energy equivalent of some ten thousand World War II's" amassed in its nuclear arms cache.

Since it is safe to assume that even if the 1960's did not produce a large number of missiles, the

separately incorporated entity.

The *exposure* has sought to become a publication of a registered student organization of Boston University and has sought University funding. Such student publications are required to have a faculty or staff advisor. One of the responsibilities of the advisor is to ensure that no material which the advisor believes libelous will be published. The *exposure* has refused to meet this requirement for University funding.

The issue is not then whether the *exposure* shall be published but whether it shall be subsidized by Boston University. The *exposure* cannot choose to be independent of the University and at the same time receive a subsidy from it. As an independent publication, it will, like the *Daily Free Press*, have the ability to print whatever it likes and to be distributed on campus. Boston University's dedication to a free press ensures this.

Johan A. Madson
Dean of Student Life
Boston University
Jan. 30, 1978

feedback

BU clarifies position

To the editor:

In recent weeks, your newspaper has carried stories about the controversy surrounding the denial of funding to the *exposure*, a publication written by Boston University students and others, which has been denied University funding until it agrees to conform with University policy. I would like to offer a brief explanation of the University's policy with regard to publications:

Boston University is fully committed to the concept of a free and unfettered press. If, however, a publication is to be financed by University funds, the University has a responsibility to ensure that it is free of libelous material that would be harmful to others and could lead to damaging litigation. For this reason, it has been University policy since 1969, during the administration of President Arland Christ-Janer, that the University will not be responsible for student publications which create such a potential. These publications must be independent. *The Daily Free Press*, a publication of Boston University students, is independent — a

Snow storm opening

To the editor:

On Friday, Jan. 20, the worst snow storm in over 100 years hit Boston. In the early hours of the morning, forecasts indicated the severity of the storm, predicting up to 18 inches of snow and high winds. A decision was made by

Personnel to keep the Institute open in spite of these warnings and the already poor road and parking conditions from previous storms during the week. By eight o'clock that morning radio and TV reports advised people to stay

(Please turn to page 5)

opinion cont.

feedback

Kidnappers demand more IAP

Editor's Note: This letter was found in The Tech's mailbox on Monday morning.

We have the IAP man and he will die unless these demands are met by midnight of the last day of IAP:

1. IAP must be extended thirty more days.
2. The letter "Q" must be stricken from the alphabet.
3. All Institute courses must be taught in the furlong stone fortnight (FSF) system.
4. All classes must be taught in COBOL.
5. A sixteenth week drop date.
6. President Wiesner must eat a lunch at Lohdell.
7. Light must observe the 55 mph speed limit.

We will await a reply in *Tech Talk*.



Photo by David and Kelly Group

MIT unfair to employees during snow

Continued from page 4.

home. Still MIT did not change its decision to remain "open and operating as usual." By nine o'clock there was no doubt of the crushing effects of the storm on transportation and the extremely hazardous driving conditions. At mid-morning Governor Dukakis made an appeal for people to stay home or go home if they were in the city. MIT chose to ignore these unusual circumstances and kept the Institute open until 12 noon.

Miraculously no one was seriously injured, but we feel that MIT unnecessarily endangered the lives of its employees by its decision.

Now we find that the biweekly and hourly employees who were either unable to come to work or were sensible enough to heed the many warnings to stay home are being penalized by the loss of vacation or personal time.

We question a policy which is so inequitable and punishes only the lowest paid employees at the Institute for a decision which is already questionable. Employees must rely on the Institute to make sensible decisions on their behalf. We wonder who was responsible for making the decision to remain open on Jan. 20 and suggest that if a particular group of employees is going to be penalized, they should have a representative who will make recommendations on their behalf.

Susanne Fairclough
Sandra Knight
Ann MacGibbon
Jean Mooney
Chip Schramm
Ruth Wagner

The Tech welcomes Letters to the Editor, which should be typed and triple-spaced. Unsigned letters will not be published. An author's name will be withheld on request.

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AIR FORCE
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Classic magic amazes and astounds

By Jordana Hollander

A crowd of 400 watched a talented demonstration of classic stage magical illusions performed by Hank Lee, David Rich, Steve Thomas, and their assistant Cathy in Kresge Monday night.

The evening opened with pretty assistant Cathy producing Thomas out of a stack of previously empty boxes. Thomas then ran through a series of common magic tricks like scarves appearing and changing color, flowers that appear and multiply, doves pulled out of handkerchiefs, and fires created in top hats.

Lee followed with bad jokes and good magic. He burned and then rediscovered a \$20 bill to the confusion of his student victim. He then played musical cylinders with a glass and multiplying bottles of Scotch.

An ISC member was taught by Rich how to turn a handkerchief into a lemon and back again. The mistakes involved in this lesson were more interesting than the transformation itself.

Two of Houdini's most famous escapes, from a straitjacket and Metamorphosis, were attempted by Thomas. He emerged mused but triumphant from the jacket. Thomas then exchanged places with Cathy, at the time locked in a chest. As the curtain came down Cathy was attempting to release him from the handcuffs.

The three combined efforts to remove a set of swords from a box so Cathy could reappear on stage. Thomas continued with the illusion of three ropes, a changing picture, tissue paper torn and recombining into a flower and a hat, and an egg trick where he nearly covered the head of a student volunteer with egg.

After an elaborate card trick by Lee, Thomas performed the famous Zig-Zag illusion where the cute assistant is cut in three and the middle portion pushed out of line. The show ended with the three magicians pulling successively larger bouquets out of empty cylinders.



Magicians David Rich, Hank Lee and Steven Thomas take their bows over bouquets of paper flowers they had pulled out of empty cylinders. The three magicians gave an exhibition of classical magic to an audience of 400 in Kresge last Monday night. (Photo by Mark James)

events

Abarca, Perry dance in exhibition

By Veronica Tomczyk,
Leigh J. Passman, and
Daniel Togasaki

Volpone Or, the Fox, Ben Jonson's hilarious comedy, will be presented by MIT Dramashop as its IAP production. Performances are Fri. and Sat., Feb. 10 and 11, and Thu., Fri., and Sat., Feb. 16, 17, and 18, at 8pm in Kresge Little Theater each night. Tickets are \$2.50 (\$1.50 on opening night only). For reservations call x3-4720. Tickets will also be sold at the door and in Lobby 10.

Course 21 announces a new acting course for the spring semester: 21.116 Acting II (3-0-6). The prerequisite is 21.119 Experimental Video Acting Workshop or equivalent acting experience. It is the sequel to 21.119 and video equipment will continue to be used as a critical tool. The class will meet Mon. & Wed., 3:30-5pm and will be taught by Naomi Thornton. This course may be used to fulfill a Drama Concentration. For further information, call x3-2908.

Lydia Abarca and Ronald Perry of the Dance Theatre of Harlem electrified a packed house at Kresge Auditorium last Saturday night, climaxing a week-long IAP program entitled *The Ballet*. The program, sponsored by the MIT Graduate Student Council, featured the Boston Repertory Ballet (BRB), joined by three guest artists from the Dance Theatre of Harlem (DTH). During the week there had been lectures, demonstrations, and classes conducted by the Boston Repertory Ballet, and Ballet Master Samuel Kurkjian, and BRB teacher Leo Guerard.

The first piece, *Soirée Musicale*, had the energy characteristic of classical folk dances, but lacked unity, precision, and good technique. The matching of partners was poor, but excusable, as only two male

members of the BRB participated in this performance. Apparently, not enough time was spent rehearsing as couples or as a group for this dance. The partners were not sufficiently conscious of each other, frequently losing eye contact. Their poor timing and mismatched styles were too sloppy for classical ballet.

The second piece was a sweeping contrast. *Pas de deux* from *Agon*, choreographed by George Balanchine (New York City Ballet), featured Lydia Abarca and Ronald Perry. They were fantastic as a pair, as well as individually, exhibiting excellent control. The dance was interesting and their flawless technique made it a success. The audience responded with thundering applause. Critic Walter Terry wrote in 1959, "... *Agon* has no plot, no specific emotional coloring, no dramatic incident. It does mirror the rhythms, the dynamics, and the witticisms of the

music..."

The third piece, entitled *Cole Porter Suite*, was danced to a collection of Porter's more popular songs, played by Herman Weiss and sung by Susan Allen. Choreographed by Kurkjian for this production, the dance poked fun at the songs, exaggerating their meanings and feelings. Certain individuals danced well, showing good technique in what should have been a crowd pleaser.

Abarca and Perry returned for *Grand pas de deux* from *Le Corsaire*. From the moment Perry entered with a tremendous flying leap, the audience was captivated by the two artists. The four sequences depicted a pirate's pursuit of a beautiful young girl. Abarca and Perry displayed perfect technique and were repeatedly interrupted by spontaneous bursts of applause. The two artists, well aware of their

(Please turn to page 7)

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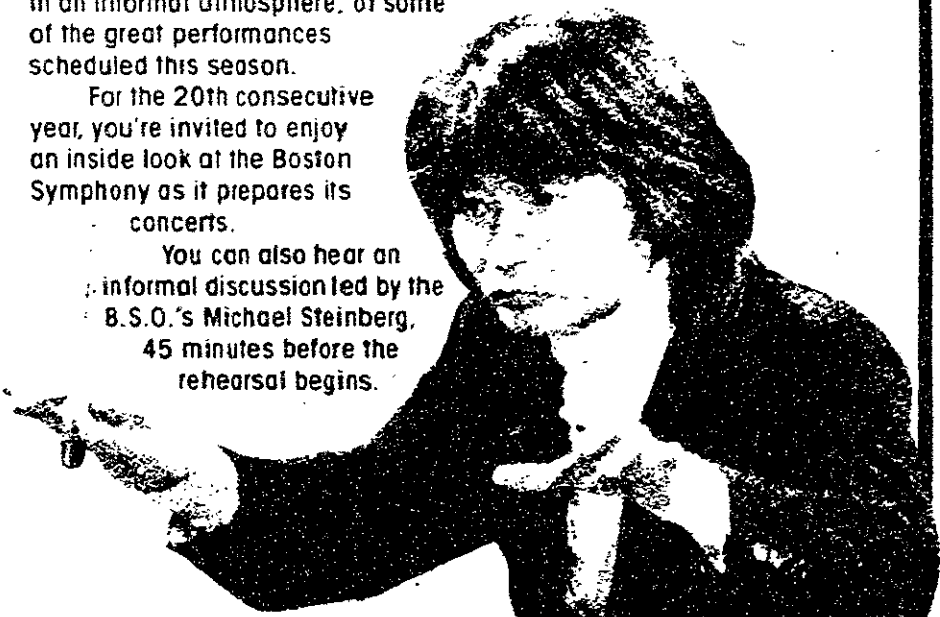
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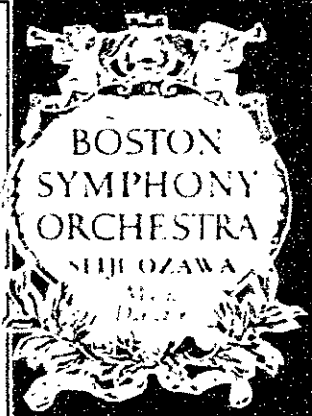
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DATE	CONDUCTOR	WORKS BY
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MAR. 29 7:30pm	GENNADY ROZHDESTVENSKY	WORKS BY MOZART, SHOSTAKOVICH
APR. 26 7:30pm	SEIJI OZAWA	WORKS BY LISZT, WAGNER SOLISTS: Jessye Norman, Peter Hoffman, Gwynne Howell

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arts cont.

Ballet masters ignite crowd

(Continued from page 6)

hold on the audience, concluded with a dynamic finish which brought the entire crowd to its feet for a standing ovation.

The final piece, *Speed Zone*, was a modern dance choreographed by Kurkjian. The dancers, including Keith Saunders of DTH (who also appeared in *Soirée Musicale*) were well suited for the style of this piece, and were able to perform their best. The lighting was very effective, and provided interesting accompaniment to the

choreography by throwing colorful shadows on Kresge's walls. The piece featured Jacquelyne Curry in several beautifully performed solo movements.

The Boston Repertory Ballet gave a fine show, with a splendid variety of dances. The three guest artists from the Dance Theatre of Harlem turned in superb performances. The Boston Repertory Ballet's attempts at classical ballet, however, were disappointing, whereas their modern dancing was very well done.

Genesis tour captured

Seconds Out — Genesis on Atlantic Records.

By David Shaw

When Peter Gabriel, lead singer for Genesis, left the group in 1975, many feared that Genesis had come to an unfortunate end. However, the group recovered quickly due to the efforts of drummer Phil Collins, whose voice is so close to Gabriel's that the two are virtually indistinguishable. The band continued on, releasing two albums, with Collins serving the dual role of lead singer drummer. Their latest album, *Seconds Out*, is a live documentation of Genesis' success.

The album, recorded in Paris, features the best of the group's latest compositions plus renditions of their earlier classics. Collins' drumming duties have been taken over by two others; ex-Yes-man Bill Bruford for the 1976 tour; and for the '77 tour, Chester Thompson, formerly with Weather Report and Frank Zappa.

Side one opens with *Squonk*, which begins rather quietly but rises to an almost chaotic pace as it progresses. In *The Carpet Crawl* (on the *Lamb Lies Down on Broadway* album it is titled *The Carpet Crawlers*), Collins delivers a performance that makes Gabriel's pale in comparison. His singing is equally good in *Robbery*, *Assault and Battery* and *Afterglow*. Side two opens with two songs from the *Selling*

England by the Pound album: *Firth of Fifth* and *I Know What I Like*. The first is slightly lacking — I miss the long piano intro and Gabriel's flute. The second takes a while to get started, but the wait is worth it. Next is *The Lamb Lies Down on Broadway* which the group performs at an almost breakneck pace; this is followed by the closing section of *The Music Box*.

All of side three is taken up by the group's tour-de-force *Supper's Ready*. Collins injects a lot more excitement into the vocals while the band cuts some of the original's frills. Both changes make this rendition of the song more direct and flowing, which is an improvement. Side four should be called the drummers' side, because it features the talents of Collins, Thompson and Bruford. Bruford lends his efforts to *The Cinema Show*, and Thompson contributes to *Dance on a Volcano*. However, the best was the last cut. Collins and Thompson power through a drum solo that must be listened to with the bass cranked up, then launch into an astounding high-energy version of *Los Endos*, which fittingly closes the album.

Having seen Genesis live in 1977, I think this album perfectly recaptures the excitement of the group's concerts, as well as being one of the finest live albums to be released in recent years.



The Average White Band

AWB's sound raw but clean

By Drew Blakeman

The live performances of many groups sound very little like their studio recordings due to the marvels of electronics, effects like echoes and overdubbing. One group which has never needed to rely on electronic gimmickry for their success is the Average White Band. The sound of AWB is virtually the same whether in concert or on records. Their music is highly amplified, but nothing else is done to alter its intrinsic characteristics.

In their concert at the Orpheum last Saturday, Jan. 28, AWB played its particular brand of disco quite well. The band's fast-paced music kept the capacity crowd on its feet for much of the performance. Of special note was the quality of the sound, which was not over-amplified or distorted.

AWB bases its uncluttered sound more on the superb percussion work of Steve Ferrone and innovative saxophone instrumentals than on vocals. A notable exception is *Work to Do* featuring Hamish Stuart on lead vocals. This song has much longer lyrics than the typical one-line AWB song, and Stuart displayed his vocal talent well.

Harmonia Commercium, the new AWB album due to be released this month, was featured heavily in the set. The group's performance of these new songs, particularly the title cut, was not as good as that of their older material. AWB has seemingly abandoned its usual style in favor of a more disco-oriented format, calming down their normally frenzied tone to one which is considerably more mellow and not as exciting as the Bee Gees.

The concert was very short — only one hour-long set was played, which was fol-

ramblin'

lowed by a single half-hour-long encore. AWB performed as many variations on *Pick up the Pieces* as they could think of during that half-hour, including introductions of the six band members, solos by each, and a lot of audience participation. The crowd was expecting a longer show, and became nasty when the house lights were turned on after only 90 minutes of music had been played. The group did not perform *Cut the Cake*, one of their most popular numbers.

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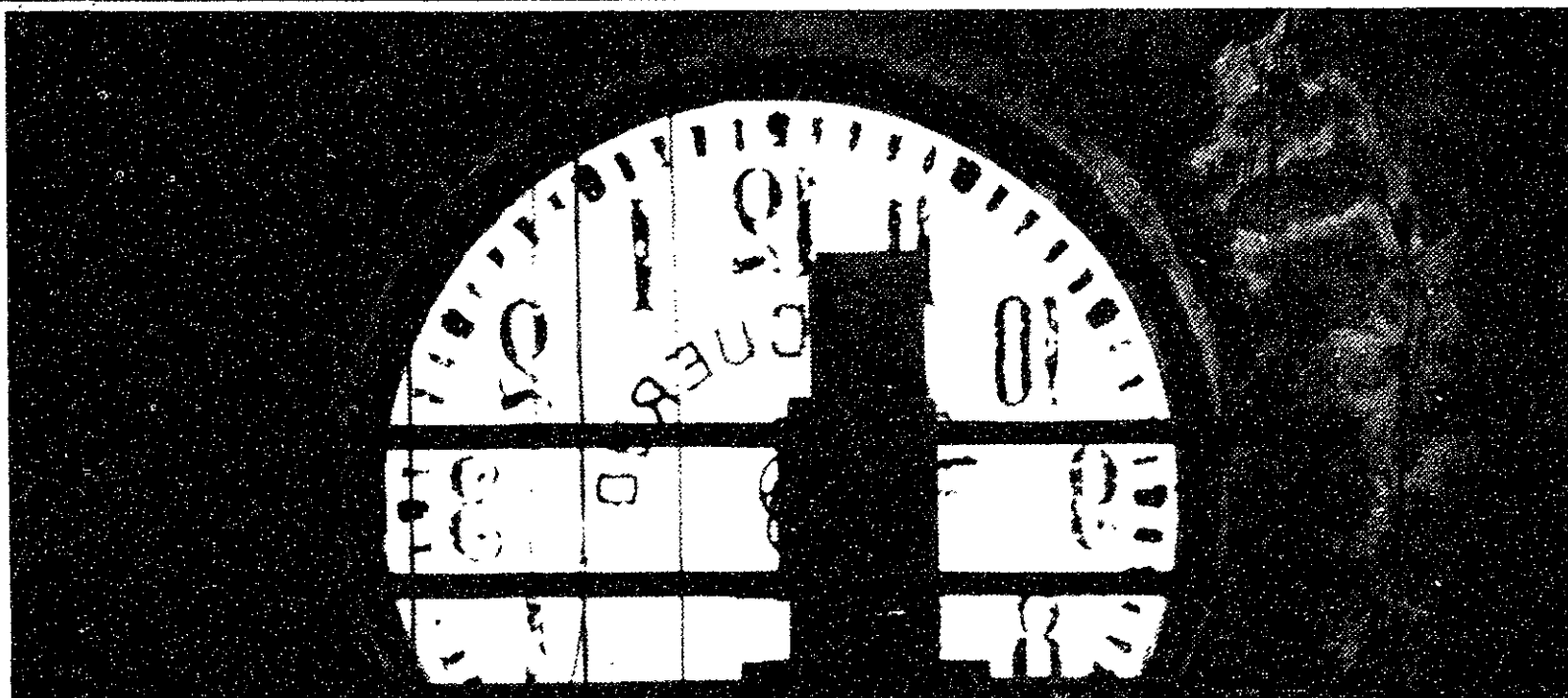
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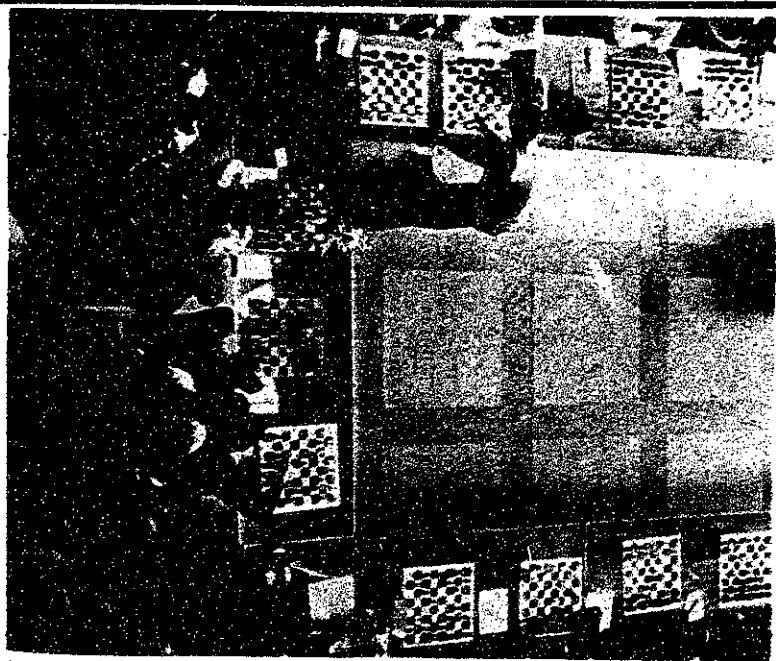
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International chess master Ken Rogoff took on 28 opponents simultaneously in Lobby 7 last Friday. The result: 23 wins, 2 losses and 3 draws. Rogoff, a third year graduate student in economics, is the fifth-ranked chess player in the United States. (Photo by Steven Solnick)

55mph on a bicycle?

Editor's note: The Tech received the following article from Professor of Mechanical Engineering David Wilson. Wilson is on the Board of Directors of the International Human Powered Vehicle Association.

In the past decade man has reached the moon, flown a pedal-powered aircraft in a closed 1-mile circuit, and climbed Mount Everest from every conceivable direction. What next? Dr. Allan Abbott, a young M.D. from Dana Point, California and a renowned high-speed bicyclist who appears twice in the Guinness Book of World Records has now offered \$2500 to anyone who can break the national 55mph speed limit in a human-powered vehicle. Can it be done? Dr. Abbott thinks so.

Recently, at the International Human Powered Speed Championships at the Ontario Motor Speedway in California, two sleek streamlined pedal-powered machines broke 49 mph for the first time in history. Dr. Abbott himself rode a bicycle of his own design at over 48 mph. The fastest vehicle had 4 wheels and was propelled by hand and foot cranks with the rider pedaling furiously on his stomach. Another was a standard racing tandem bicycle. In all of the fastest machines the riders were completely enclosed in light sleek streamlined plastic shells.

At near 50 mph, wind is almost hurricane force, so streamlining is a must if a human power plant is to be used. To win the Abbott Prize, it may seem easy to increase the speed only 6 mph over what has already been done. However with the present generation of machines, at 55 mph the cyclists would have to expend 30 to 40 percent more energy than they would at 49 mph. Riders would have to put out about 1.5 horsepower to do this. Obviously,

then, to win the prize, many improvements must be made.

After breaking two world bicycle speed records, Dr. Abbott has recently decided to retire from active competition. In 1972 he rode a specially designed bicycle behind a race car at over 140 mph on the Bonneville Salt Flats in Utah. The race car completely shielded the bicycle from the wind thus making such incredible speeds possible. This record still stands. In 1976, Dr. Abbott broke the world unpaced bicycle speed record at 47.8 mph for 200 meters with a flying start. In this type of race, riders are all on their own with no towing, motor pacing, or stored mechanical energy of any kind permitted. In 1977, Abbott improved this speed to 48.84 mph, but still faster was Ralph Therio who holds the present record at 49.38 mph.

Dr. Abbott's offer to pay anyone \$2500 who can break 55 mph in an unaided human-powered vehicle, is intended to stimulate competition and technological improvement in human-powered transportation. The California State Highway Patrol has promised to issue a complimentary traffic ticket to anyone who wins.

The rules are simple. Any machine is legal provided there is no stored energy of any kind. Springs, motors, flywheels, batteries, pressure cylinders, etc., are prohibited. The vehicle may have one or more riders in it, and must cover 200 meters with a flying start in 8.13 seconds or less. The course must be level and wind must be less than 4 mph. Electronic timing must be used. No towing or motor pacing is permitted.

For further details on the Abbott prize, and how to become the world's fastest human, contact Professor David Wilson at MIT.

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Highlights of IAP '78

Continued from page 1

'78 was one of these. Also, the "Ascent of Man" series and, for the second consecutive year, the "Leyman Lectures" drew large audiences. Sauer added that other popular lecture series included "Home Repair," "Mountaineering Rescue and First Aid," and "Career and Lifestyle Discussions." She said that the Mechanical Engineering, Physics, and Earth and Planetary Sciences Departments all gave informative lectures. One of the more unique lectures, which received city-wide attention, was "Horse Race Handicapping."

As a result of the numerous activities this January, many lectures or activities occurred simultaneously. Interline maintained that the scheduling is done almost solely by the person or persons conducting the activity. She said that the individuals who schedule an activity merely call up the IAP office and give the time that they prefer. She said that she tried to encourage these people not to choose time slots which were already filled with activities. She also attempted to prevent a large number of activities from falling within the same week of IAP. She also hopes that in the future, more activities will be scheduled during the evening.

In order to help students remember when and where the activities occur, large black bulletin boards were placed in Lobby 7 containing the list of events for each day. Sauer, who had thought of the idea, hopes to make more improvements on advertising the schedule for the activities next year.

Both Sauer and Interline were pleased by the enthusiasm of the students, who they said suggested numerous topics for IAP activities. One student requested

that a lecture be given on "Catastrophe Theory." Soon afterwards, the Math Department arranged for this lecture to be presented.

Another suggestion was presented by Eugene Lui, who wished to conduct a class on Tai Chi, the classical system of Chinese exercise. According to Sauer, Lui was sure no one would come, but instead was very happy with the large number of students who attended.

A *The Tech* survey revealed that 75 percent of the undergraduate population was at MIT during the second week of IAP. Another survey conducted by the IAP Policy Committee last year indicated that this percentage is typical for that time of month.

IAP began as an experiment eight years ago. Joel Orlen, Chairman of the IAP Planning Committee, said that he believes that IAP has become "an integral part of the education program at MIT." He feels that the diverse learning opportunities provide an educational experience that most students probably would never get the chance to have.



Doc Edgerton leads the audience at the Soap Bubble Carnival in a round of "I'm Forever Blowing Bubbles." Participants in the show, which packed Room 66-110 learned about some of the mathematical principles which explain the behavior of soap bubbles and films. Holding the microphone for Edgerton is Dr. Frank Morgan, the originator and "ringmaster" of the carnival. Photo by Tom Russ courtesy *Technique*.

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notes

* Registration for third quarter physical education classes will be held Tue., Feb. 7, at 8:30am in the duPont Gymnasium.

* The MIT Dance Workshop will have its first meeting on Wed., Feb. 8, 7pm, in the I-Cas Lounge in duPont. The Workshop is directed by Jeff Dixon, choreographer/dancer. Besides classes in addition to regular dance and improvisation classes, the workshop plans to present a student performance in the spring.

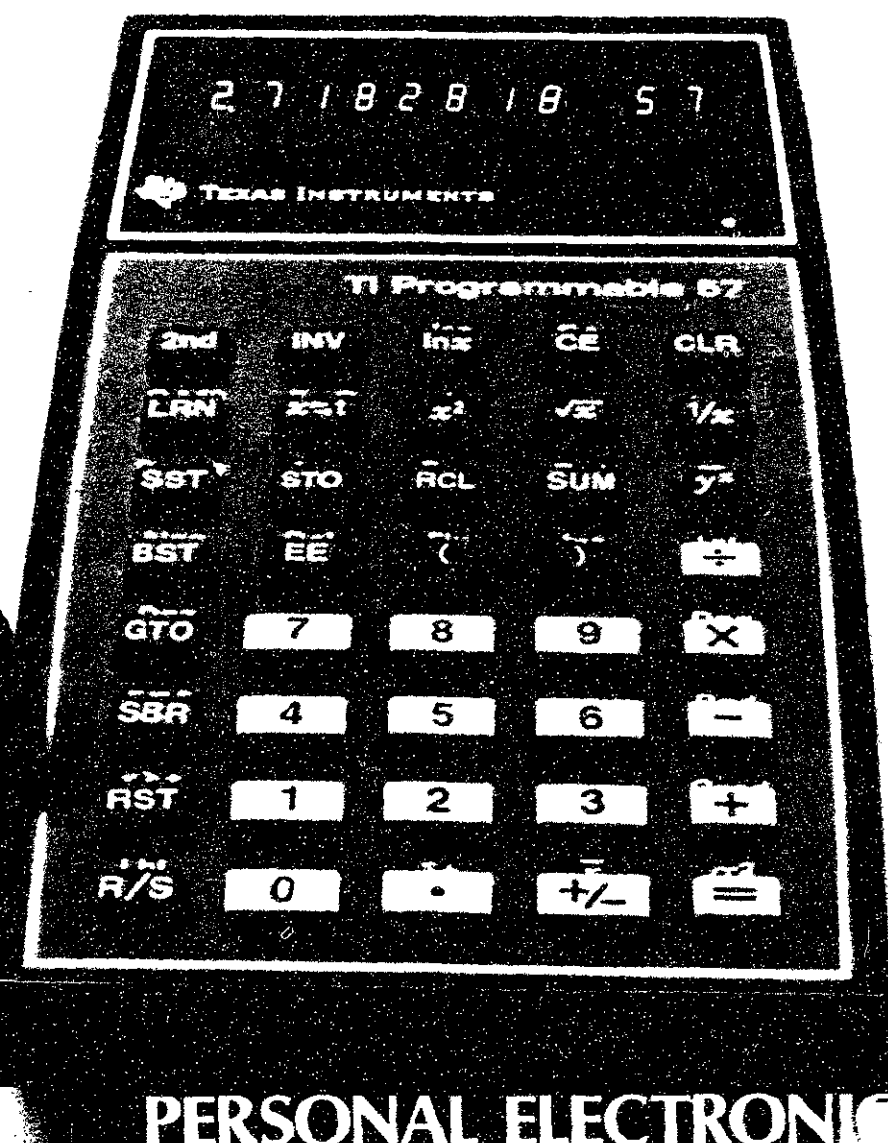
* INTERFACET, a non-profit educational association, is sponsoring a conference this weekend for prospective parents, health professionals, and others interested in the future of childhood, entitled "Choices for Childhood." For more information, call 964-7140.

* The World Economy in the Year 2000 is the Cambridge Forum topic for Feb. 8. The featured speakers are Dwight Perkins of Harvard and Anne P. Curran of Brandeis University. For more information call 576-7772. Free.

* Students and faculty members can take advantage of a 50 percent discount. Adairberry Airlines offers for passengers departing on Saturday and returning on flights departing before 12:01pm the following day. This Saturday Flight Sale is effective Jan. 7 through March 19, 1978.

* The Harvard Graduate School of Design presents an exhibition "Spirit in the Landscape," from Jan. 16 through Feb. 29, in Gund Hall lobby, 48 Quincy St., Cambridge. The exhibition includes 70 photographs of the upper Labrador wilderness area, taken by Arthur Boutlier, head of National Park Planning, Parks Canada. Boutlier had access, via helicopter, to views of the Torngat Mountains never before seen. The exhibition is free and open to the public, 10am-5pm, Monday through Friday. For further information, call 495-4731.

* The Grestock Trio, an ensemble formed by flutist Paul Fried, cellist Paul J. Feldman and harpist Elizabeth Morse will perform this Friday at 8pm in the Brockton High School Fine Arts Building. Tickets are priced at \$3 for adults and \$2 for students and senior citizens and may be reserved by calling 588-5026.



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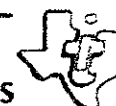
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sports cont.

Dartmouth kills W Swim

Swimming season now 3-1

By Gregg Stave

The MIT Women's Swim Team was devastated by Dartmouth's speed and depth last Saturday, losing 110-19 at the Alumni Pool.

Against a far superior Dartmouth squad, MIT could manage only four second place finishes in fifteen events. Only one swimmer, Sheila Konecke '80, came close to winning an event. Konecke's time of 1:18.2 in the 100 yard breaststroke was short by less than two tenths of a second. Captain Tina Kangas '78 touched out an opponent to finish second in the 50 yard breaststroke with a 38.3 second clocking. The other bright spots for MIT came in the

100 yard individual medley and in the 200 yard freestyle. Ruth Harris '81 was second in the medley with a 1:19.1 finish. In the freestyle event Judy Snodgrass '81 also picked up a second place completing the eight laps in 2:19.6.

Outstanding swims were recorded by Dartmouth in several events. In the 200 yard freestyle relay Nancy Gildan recorded a remarkable 25.5 second split. Later in the meet, four Dartmouth women swam an 800 yard freestyle relay as an exhibition event. Their 8:31.0 performance qualified for the Nationals.

Prospects for the rest of the

season are not as grim as these results might indicate. Individual progress is being made. MIT is facing their strongest competition at the beginning of the season. The team was also handicapped by the absence of a diver and by an injury to freestyler-butterfly Karen Fabricius '80. Even though the record stands at 0-2 in their second year as a varsity team there is still a good chance they will repeat last year's winning season.

More than half the team spent the first two weeks of January training in Melbourne, Florida. Averaging better than 10,000 meters per day, the women worked out twice and occasionally three times a day.

Tomorrow the women travel to Southern Massachusetts University, and then go to Connecticut on Saturday to face Trinity.

(Continued from page 12)

mann is also happy with the performance of the divers, especially Ken Brady '79 who dove both 1 and 3 meter on Saturday. The divers are very inexperienced; two of them have been diving only a week. Batterman is optimistic that his squad will turn in some good performances as the season

progresses and they gain more experience.

Tonight the team faces Amherst in what Coach Benedick says is going to be a really tough meet. He sees the medley relay as the key to the meet. "If we can win the medley relay we have a good chance at beating them."

score board

Men's Swimming 73, WPI 40

Men's Swimming 69, Lowell 43

Basketball 65, Ursinus 91

Basketball 48, Coast Guard 53

Women's Basketball 15, WPI 51

Fencing 16, Dartmouth 11

Fencing 16, SMU 11

Women's Fencing 6, Dartmouth 10

Women's Fencing 9, SMU 7

Women's Gymnastics 92.15, Yale 128.1

Hockey 3, Plymouth Union 6

Squash 1, Williams 8

Wrestling 13, New York Maritime 41

Wrestling 6, Central Connecticut 34

Track 77, Bowdoin 59

W Fencing is struggling

(Continued from page 12)

nent's mistakes to chalk up a win for the 9-7 victory against SMU.

The loss on Friday was an upset to MIT's traditional record of wins against Dartmouth. Prettyman took three out of four bouts, one of them in a convincing 5-1 win against J. Sudikoff

who ranked second in last year's New England Championships. Shimaoka beat two of her opponents decisively, one of them in 27 seconds. Wing added another victory to give MIT six wins.

The MIT JV team defeated SMU 14-2. Nancy Robinson '81 fenced cautiously to win all three of her bouts. Sayuri Kuo '81 won three bouts, two of them 5-0, the first of which was won in 24 seconds. Marian Stein '80 also beat three members of the SMU squad: Amelia Phillips '81, two; Jean Gregory '79, two; and Denise Murphy '78, one.

The MIT women face 11 more teams this season so the chances of the usual lopsided winning record are still strong. The next home meet is Wednesday, February 1 against Brown at 7:00 in the duPont Fencing Room.

on deck

Wednesday

Men's and Women's Varsity

Fencing vs. Brown 7pm

Women's Varsity Gymnastics at

URI 7pm

Varsity swimming at

Amherst 7pm

Varsity Wrestling at Boston Col-

lege 7pm

Thursday

Varsity Squash at Amherst 3pm

Women's Varsity Swimming at

SMU 7pm

Friday and Saturday

Women's Varsity Basketball

Tournament

Varsity Skiing JSC/SMC Car-

nival at Madonna/Middlebury

Varsity Track GBCAA at Har-

vard

Saturday

Varsity Basketball at

Amherst 8pm

Varsity Fencing at Holy

Cross 1pm

Women's Varsity Fencing URI &

RIC at Holy Cross 1pm

Varsity Gymnastics at Coast

Guard 2pm

Women's Varsity Gymnastics vs.

RIC and Maine (Far-

mington) 2pm

Varsity Hockey vs. Bates 7pm

Men's and Women's Varsity

Swimming at Trinity 2pm

Varsity Wrestling at Williams 2pm

Tuesday

Varsity Basketball vs.

Nichols 8:15pm

Women's Varsity Basketball at

Wellesley 7pm

Women's Varsity Fencing at Har-

vard 6pm

Women's Varsity Gymnastics at

Boston State 6pm

Women's Varsity Swimming at

Wellesley 6:30pm

Varsity Wrestling vs. UConn at

WPI 6pm

Wednesday

Varsity Hockey vs. Curry Col-

lege 7pm

Varsity Swimming vs. BU 6pm

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SPC

IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medell's Mutants	6	2	ATU-B	3	0	Economics	3	0
The 'Macks	6	2	ΘΔΧ Orgy	2	0	XΦC1	3	1
Economics	5	3	ΘΧΒ	3	1	ΘΔΧ Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan 'A'	1	5	NRSAB	1	3	BΘΠ "C"	0	2
Second West	1	8	ΠΔΦ "B"	0	3	Korean Stds	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔT "A"	6	1	Nodules	2	0	ΣΧC	3	0
ΔTΔ "A"	6	2	KΣ "Ball Hdlrs"	3	1	ΣΦEC1	2	0
Fiji "A"	5	3	ΣΧB	2	1	ΔTΔ "GRRR"	2	1
Baker Bullets	4	3	ΦBE B	3	2	Fiji	1	1
MacGregor	2	6	ΦB	3	2	ΔT "C"	1	2
The Bojacks	0	8	ΦΔΘ	1	2	ΔXA "C"	0	2
A 2 Living Group			B 6			C 8		
Team	W	L	Team	W	L	Team	W	L
ΣAE "A"	6	0	Team	2	0	1st E Redneck	3	0
ΔXA "A"	5	2	Nodules	2	0	Wishwood Shute	3	0
ΔKE "A"	4	2	KΣ "Ball Hdlrs"	3	1	Dawg Shooters	1	1
2001	3	4	4th West	3	1	ΠΔΦ "C"	1	1
AEB	2	4	EΘ "Snakes"	3	1	EΘ	1	2
Chocolate City	2	5	HoJo	3	1	ΘΔΧ C2	0	2
ΠΔΦ XTC"	1	6	Burton 1C	2	1	NRSAC	0	3
B 1			C 1			C 9		
Team	W	L	Team	W	L	Team	W	L
ΦKΣ "B"	5	1	Team	3	1	Conner 3	4	0
Burton Fives	4	2	4th West	3	1	Second East	2	0
From A to B	4	2	EΘ "Snakes"	3	1	XΦC2	2	1
Nuclear Eng	3	3	HoJo	3	1	"C-NWON"	1	2
Vigilantes "B"	2	3	Burton 1C	2	1	Blazers	1	2
BΘΠ "A"	1	2	Sick Puppies	1	2	ATU "C"	0	2
IKKA	1	4	ΦKΣ	0	3	Jack Forey	0	3
Ashdown	1	4	Coalition	0	3	C 10		
B 2			C 2			D 1		
Team	W	L	Team	W	L	Team	W	L
Transports	4	0	Air Force ROTC	5	0	TWEPOE	4	0
Chokin Tokers I	4	2	Les Tares	3	2	Vigilantes D'	2	1
System Dynamics	3	3	Vigilantes C1	3	2	McCormick	2	1
Hydros 2	2	2	E Prus Blue Boys	2	3	N House II & V	1	1
TIF "S & D's"	2	3	7W Enforcers	2	3	Champignons	2	3
Mac C	2	4	XM1 Sports	0	5	D 2		
N House V & II	2	4	C 3			D 3		
ΣAE Bouncers	1	2	D 3			Team		
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The Filters	2	2	Tetazoo	2	1	Burton 1D		
Datamen	1	3	B M F's II	2	2	2nd West "D"		
Club Latino	1	3	ΦK Celtics	1	2	The Dancers		
New III Stooges	1	3	MacGregor E	1	3			
B 4			C 5					
Team	W	L	Team	W	L			
ΣAE B1	4	0	Thunderbolts	4	0			
Did We Play	3	1	Tri City Tycoons	4	1			
Sloan B	3	1	Aero-Astro	4	2			
Abusers	3	2	Burton 5 Smokers	2	2			
AEB	2	3	B M F's I	2	3			
LSD	1	2	Baker WPOD	0	4			
Chem Eng	1	3	Roaches	0	4			
Burton H Tooley	0	5						

Fencing hopes to improve

By Jeanette Wing
(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)
Struggling to maintain a winning record has never been a problem for the MIT Women's Varsity Fencing Team (4-3) until this year. After a 13-3 loss to rival Radcliffe temporarily halted the team's winning (2-1) record of last December, MIT routed Concord-Carlisle 12-4 on January 11 for the second time in the team's history.

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tacks that left her motionless. Je won the meet bout, also cont wins, scoring m on feint-dis Meredith Boic meet off with a added another round. Julia S ing more care previous two b tance and wat (Please tu

Swimming rips WPI, ULo



One of MIT's swimmers in the 500 yard freestyle during last Saturday's double dual and WPI.(Photo by Gordon Haff)

By Gordon Haff
Last weekend in a double dual meet, MIT dealt WPI and the University of Lowell decisive losses with scores of 73-40 and 69-43 respectively.
Coach Benedick is happy with the performance of his team. He sees a great potential for improvement in many of his swimmers. He cited the drastic improvements of two swimmers, Tom Varney '80 and George Dowd '81 in particular as an example of how he sees the team will progress in the weeks ahead. Benedick noted that "at this point in the season you begin to see the things you work on in practice begin to pay off." He added that at practices the team was now doing less distance work and more work on specialty strokes.
Diving Coach Charlie Butter (Please turn to page 11)

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Persons interested in these seminars should contact Steve Raudenbush or John Terry at x3-5156. Enrollment is limited. The seminars will meet Thurs 3-4:30 in Room 20C-016.

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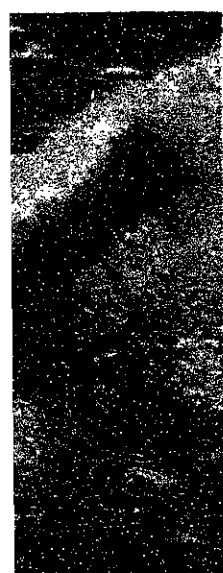
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Tactics and Strategies: An Exam Planner

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IM Basketball Standings

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Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The "Macks"	6	2	ΘΔΧ Orgy	2	0	XΦC1	3	1
Economics	5	3	ΘΧΒ	3	1	ΘΔΧ Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan A	1	5	NRSA B	1	3	BΘΠ "C"	0	2
Second West	1	8	ΠΔΦ "B"	0	3	Korean Stds.	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔΤ A	6	1	Nodules	2	0	ΣΧC	3	0
ΔΤΔ A	6	2	KΣ "Ball Hdr's"	3	1	ΣΦEC1	2	0
Fiji A	5	3	ΣΧB	2	1	ΔΤΔ "GRRR"	2	1
Baker Bullets	4	3	ΦBE B	3	2	Fiji	1	1
MacGregor	2	6	Fiji B	1	2	ΔΤ "C"	1	2
The Bojacks	0	8	ΦΔΘ	1	2	ΔXA "C"	0	2
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ΣAE "A"	6	0	Team	W	L	Team	W	L
ΔXA "A"	5	2	4th West	3	1			
ΔKE "A"	4	2	EΘ "Snakes"	3	1			
2001	3	4	HoJo	3	1			
AEP	2	4	Burton 1C	2	1			
Chocolate City	2	5	Sick Puppies	1	2			
ΠΔΦ "XTC"	1	6	ΦKΣ	0	3			
B 1			Coalition	0	3			
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ΦKΣ "B"	5	1	Team	W	L			
Burton Fives	4	2	Air Force ROTC	5	0			
From A to B	4	2	Les Tares	3	2			
Nuclear Eng	3	3	Vigilantes C1	3	2			
Vigilantes "B"	2	3	E Prus Blue Boys	2	3			
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ΠKA	1	4	XM1 Sports	0	5			
Ashdown	1	4	C 3					
B 2			Team	W	L			
Team	W	L	Chinese Stds	4	0			
Transports	4	0	ΑΔΦ	3	1			
Chokin Tokers I	4	2	Mallards	2	2			
System Dynamics	3	3	ΘXC	2	2			
Hydros 2	2	2	Nudes Inc	1	3			
ΤΕΦ "S & D's"	2	3	K-Entry Killers	0	4			
Mac C	2	4	C 4					
N House V & II	2	4	Team	W	L			
ΣAE Bouncers	1	2	ΘE	4	0			
B 3			Hillel Macabees	2	0			
Team	W	L	Tetazoo	2	1			
B T B	3	0	B M F's II	2	2			
Hydros I	3	1	ΦK Celtics	1	2			
ΣΦE "B"	2	1	MacGregor E	1	3			
The Filters	2	2	Sp Inquisition	0	4			
Datamen	1	3	C 5					
Club Latino	1	3	Team	W	L			
New Illi Stooges	1	3	Thunderbolts	4	0			
B 4			Tri City Tycoons	4	1			
Team	W	L	Aero-Astro	4	2			
ΣAE B1	4	0	Burton 5 Smokers	2	2			
Did We Play	3	1	B M F's I	2	3			
Sloan B	3	1	Baker WPOD	0	4			
Abusers	3	2	Roaches	0	4			
AEP	2	3	C 6					
LSD	1	2	Team	W	L			
Chem Eng	1	3	Thunderbolts	4	0			
Burton H Toocy	0	5	Tri City Tycoons	4	1			

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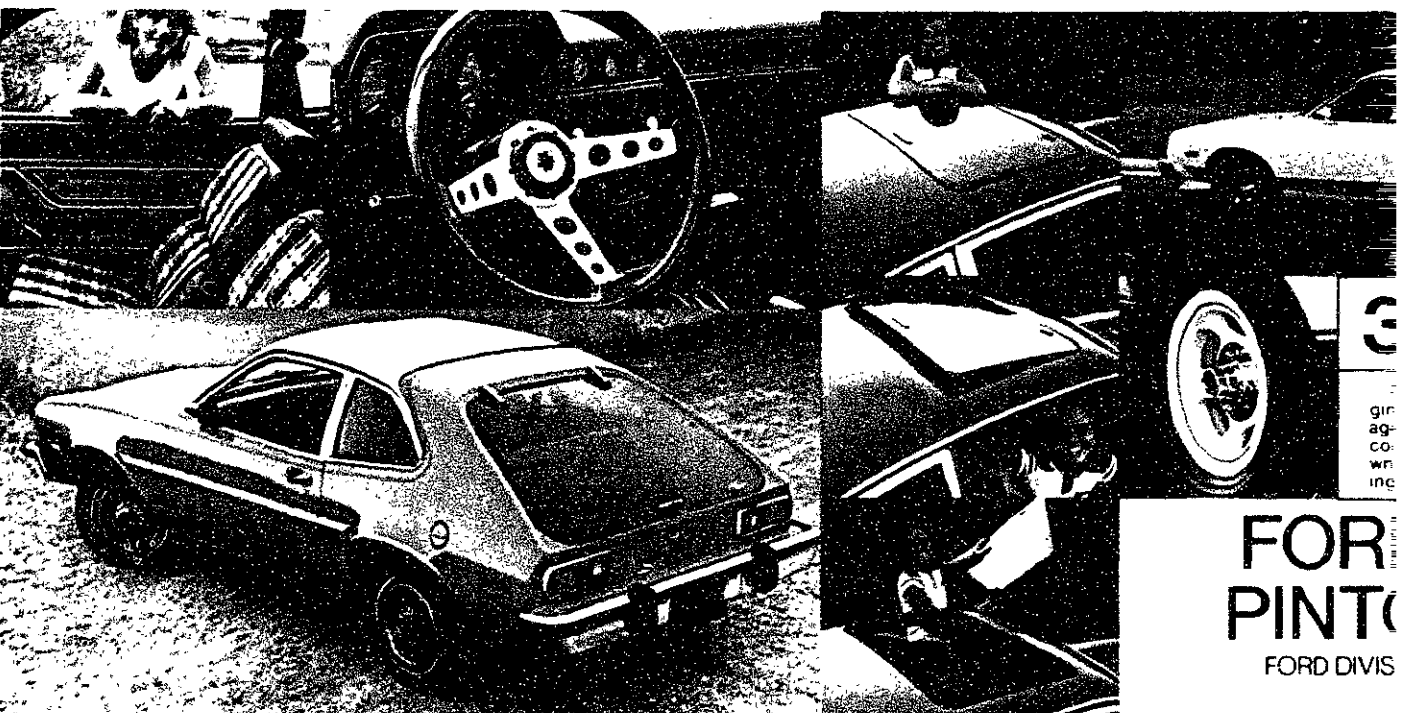
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you can never hope to follow and wouldn't even if you could.

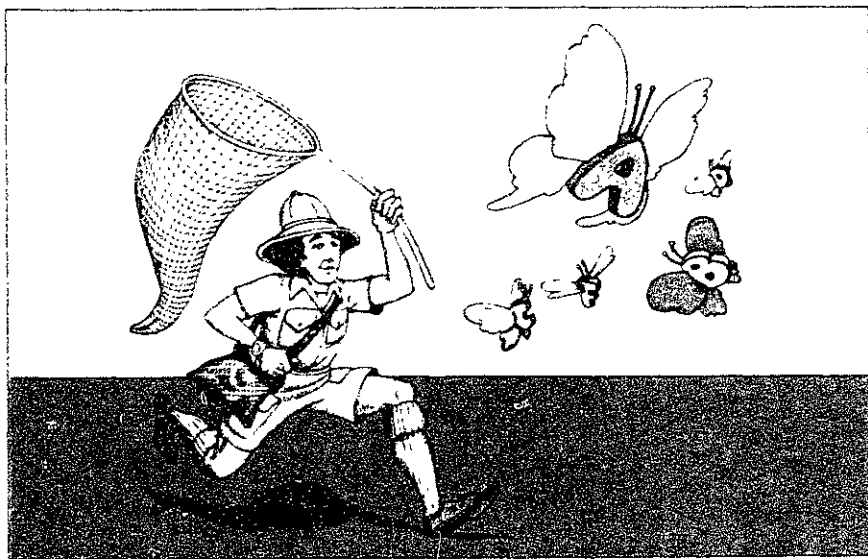
What *Tactics and Strategies* offers is a laid-back look at the testing scene that may help you better put together your grade game plan—or offer some helpful insights you haven't before considered—or at least give you some interesting reading for an afternoon.

The articles that follow cover everything from why study formulas don't work to a creative test-taking strategy to an unorthodox introduction to paper writing. We've thrown in a new look at an old phenomena—cramming—and a consoling view of six successes who weathered academic crises. And, given the intensity

of the grade game for so many students, we give special attention to coping with text anxiety.

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Good reading!



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IM Basketball Standings

A 1 Independent

Team	W	L
Model's Mutants	6	2
The Macks	6	2
Economics	5	3
Mechanical Eng	4	3
8-Ball Team	4	4
Sloan A	1	5
Second West	1	8

A 1 Living Group

Team	W	L
ΔT A	6	1
ΔTΔ A	6	2
Fly A	5	3
Baker Suites	4	3
MacGregor	2	6
The Bojacks	0	8

A 2 Living Group

Team	W	L
ΔAE A	6	0
ΔNA A	5	2
ΔKE A	4	2
2001	3	4
AEII	2	4
Chocolate City	2	5
ΔΔΦ "XTC"	1	6

B 1

Team	W	L
ΦKΣ "B"	5	1
Burton Fives	4	2
From A to B	4	2
Nuclear Eng	3	3
Vigilantes B	2	3
BΘΠ A	1	2
ΔKA	1	4
Ashdown	1	4

B 2

Team	W	L
Transports	4	0
Chokin Tickers I	4	2
System Dynamics	3	3
Hydros 2	2	2
ΔI Φ S & D's	2	3
Mac C	2	4
N House V & II	2	4
ΔAE Bouncers	1	2

B 3

Team	W	L
BTB	3	0
Hydros I	3	1
ΣΦE "B"	2	1
The Filters	2	2
Datamen	1	3
Club Latino	1	3
New III Stoges	1	3

B 4

Team	W	L
ΔAE B1	4	0
Did We Play	3	1
Sloan B	3	1
Abusers	3	2
AEII	2	3
LSD	1	2
Chem Eng	1	3
Burton H Tooley	0	5

B 5

Team	W	L
ATΔ-B	3	0
ΘΔX Orgy	2	0
OX B	3	1
Dorkatrons	1	1
Tong Xue Hui	1	3
NRSA B	1	3
ΔΔΦ "B"	0	3

B 6

Team	W	L
Nodules	2	0
KΣ Ball Hdlrs	3	1
ΣX B	2	1
ΦBE B	3	2
Fly B	1	2
ΦΔO	1	2
B-hevers	0	4

C 1

Team	W	L
4th West	3	1
EΘ "Snakes"	3	1
HoJo	3	1
Burton 1C	2	1
Sick Puppies	1	2
ΦKΣ	0	3
Coalition	0	3

C 2

Team	W	L
Air Force ROTC	5	0
Les Tares	3	2
Vigilantes C1	3	2
E Prus Blue Boys	2	3
7W Enforcers	2	3
XM1 Sports	0	5

C 3

Team	W	L
Chinese Stds	4	0
ΔΔΦ	3	1
Mallards	2	2
OX C	2	2
Nudes Inc	1	3
K-Entry Killers	0	4

C 4

Team	W	L
ΘΣ	4	0
Hillel Macabees	2	0
Tetazoo	2	1
B M F's II	2	2
ΦK Celtics	1	2
MacGregor E	1	3
Sp Inquisition	0	4

C 5

Team	W	L
Thunderbolts	4	0
Tn City Tycoons	4	1
Aero-Astro	4	2
Burton 5 Smokers	2	2
B M F's I	2	3
Baker WPOD	0	4
Roaches	0	4

Fencing hopes to imp

By Jeanette Wing

(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)

Struggling to maintain a winning record has never been a problem for the MIT Women's Varsity Fencing Team (4-3) until this year. After a 13-3 loss to rival Radcliffe temporarily halted the team's winning (2-1) record of last December, MIT routed Concord-Carlisle 12-4 on January 11 for the second time in the team's

Following this victory the women split last weekend's meets, with a close defeat to Dartmouth 10-6 to again tie the win-loss record, and a comeback victory against SMU 9-7 to give the team a winning edge in the season record.

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Magical Memory

The Unending Quest for a Study Formula That Works

by PATRICIA WESTFALL

Thought, not memorization, is the soul of learning. Every professor says this. What teacher would claim *not* to be teaching students to think?

But just try and pass a test by thinking. Every student who has forgotten the year Thomas Aquinas died knows that thinking ability is not what gets tested. Memorization—dictaphone style—is the ability in question. Thinking won't derive the seven phyla or reveal the eighth wonder of the world. Only memorization counts in the crunch, and students who wish to survive had better master the skill. But how?

"Perhaps the most basic thing that can be said about human memory, after a century of research, is that unless detail is placed in a structural pattern it is rapidly forgotten," said Jerome Bruner in *Process of Education* in 1960. Bruner's concept, the importance of structure, lies in one form or another at the root of all how-to-study methods.

In the Beginning . . . Was SQ3R

The first and most famous of the foolproof, try-it-you-can't-fail study formulas was Frank Robinson's SQ3R method published in 1946. The acronym stands for "Survey, Question, Read, Recite, Review." The method, still taught today in a great many college how-to-study courses, works this way. First, **survey** the structure of the chapter, reading paragraph headings and summaries; this helps your mind get a firm grasp of the whole assignment before you read.



Next, turn those paragraph headings into questions which must be answered by the text. Then **read** (the first R) to find those answers. Robinson stresses that reading must be an active process; you should be searching for answers, not just passing your eyes over the type.

Every so often (every other page, in fact) you should stop, close the book and try to **recite** what you have just read. This is the step that is supposed to fix the information in your memory. Finally, after you have read and recited the complete assignment, take

a few minutes to just learned before

The Confess

Robinson's tested formula sionately by a until the studen the 1960's. That study formulas print at a rate manuals and books. Most of on SQ3R.

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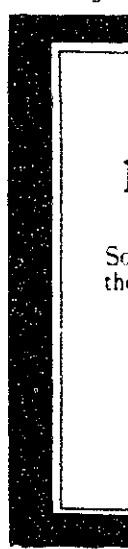
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OK4R by Walter Pauk meaning Overview, Key ideas (find them he meant), Read, Recall, Reflect and Review was published in 1962. Next came Space & Berg's 1966 PQRS (Preview, Question, Read, Summarize, Test), followed by OARWET in 1968 (Overview, Ask, Read, Write, Evaluate, Test). The champion entry was the 1973 PANORAMA which stands for "Purpose (think about why you are reading your text); Adaptability (adapt your reading speed to the difficulty of the material); Need to question (an obvious and painful stretch for the acronym); Overview; Read and relate (that is, relate the main ideas to personal experience); Annotate; Memorize; and (if you still care at this point) Assess."

Walter Pauk, the OK4R man, finally called for an end to this acronym olympics by daring to put into print what everybody had known all along: despite proof that these formulas work, no sane student ever bothers to use one. In an article knocking PANORAMA as silly ("you're reading your text because your professor told you to"), Pauk wrote, "There is no question about the value of converting a title into a question, but I can honestly say that I have never met a single student who has ever used the technique even though he knew about the textbook system incorporating this step."

A shocking confession from a man who has been teaching how-to-study courses most of his academic career.

Student indifference hardly stifled the acrolympics, however. REAP was published in 1976. REAP was different though. REAP looked as if it might have something to do with how people actually study.

Undaunted, Our Heroes Press On

How students actually study is something few researchers have bothered to study. How one *should* study, yes—advice abounds. But *do* study? No. In 1976 Robert Szabo published a sketchy survey (not study) of practices followed by successful students on his campus. Even that survey incomplete as it was—showed how far from students the acrolympics have been.

For example, most of the top students preferred studying in cycles—working hard for three or four days, then goofing off entirely for the next three or four days. So much for the "study a little bit each day" platitudes vouchsafed by the formulas.

Students also preferred to work in four- and five-hour stretches, kayoing

the formula emphasis on one-hour study sessions. All the formulas stress the importance of frequent rest breaks, but good students say the breaks interrupt concentration.

Like Pauk, Szabo found no student using a formula. He found this meant students rarely remembered the main ideas in a text, remembering instead trivial details and facts. Yet, noted the rueful Szabo, "They manage to obtain acceptable grades."

Did Szabo and colleagues consider this a hint that maybe they should abandon the quest for a perfect formula? Never. Szabo concluded his article with a ringing cry to press on to new acronyms. "We must find a method that reaches students where they are," he said.

R Is for Read

REAP might be the method Szabo was calling for. Published by two University of Missouri professors, it is, first, simpler than all the others. The R stands for read. That's it. No Survey, Question, Preview or Overview. Just sit down and read. That's what students do anyway, so for the first time in a generation the first step of a formula makes sense in human terms.

The next step, E—Encode, is equally simple. Using any method you want, simply close the book and try to phrase what you've read into your own words. Section by section? Chapter by chapter? Book by book? That's your choice. The only requirement of the method is that you actively rephrase the material *immediately*. The other two steps, Annotate and Ponder (upon which the authors elaborate at length) are just refinements of Encode: write down your encoding (for later review?) and then think (think?) about it, they say.

When one examines REAP, it's not so different from earlier formulas in that it calls for an active engagement with the material to be memorized. It is different in that it throws away the hoopla and rigid rulesiness of earlier formulas and states the meat of the matter: *Successful study requires taking time to put things in your own words immediately. Repeat, immediately.*

The Forgetting Curve

Why does study require an immediate Encoding (or Recalling or Re-citing or Evaluation or Call It What You Will)? The answer to that is suggested in some classic early research on memorization, such as the 1913 nonsense syllables study by

Ebbinghaus (ah yes, the one you had to memorize for Introductory Psych, remember?). In the Ebbinghaus study, subjects studied a list of nonsense syllables and then were tested repeatedly. After 20 minutes they had forgotten 47 percent—almost half. After a day, 62 percent were forgotten; two days, 69 percent; 31 days, 78 percent. The results were clear: the bulk of forgetting takes place within minutes after study and then tapers off.

A similar study by Spitzer in 1939 which used meaningful material came up with similar numbers—46 percent of the material was forgotten after a day; 79 percent after 14 days. Forgetting is an immediate thing. By tonight you will have forgotten almost 50 percent of this article—unless you try to encode it or put it in your own words the minute you finish.

Spitzer proved that encoding works to counter the brain's awesome and instant forgetting power. In another study he conducted, some subjects merely studied (i.e. read) materials while others recited the information in their own words immediately after reading it. Seven days afterwards, those who had recited remembered 83 percent of what they had read. The others only remembered 33 percent. This shows that encoding works, but for the why of that working you'll have to return to Bruner's concept about structural patterns. Encoding apparently makes you create memorable patterns. It works.

Note-taking, Like Love, Requires You Listen Dearly

Assigned readings are not the only material you must commit to memory. You will also be tested on lectures. Studying lecture notes is a lot like studying a text. First you read, then you encode. But before you can read or encode you must take notes, and that requires listening.

It is a subtle skill, perhaps because it's so human a skill. Professors are not textbooks; they're humans who do not organize themselves into easy-to-grasp chapters and headings and who often talk rapidly, slowly or monotonously.

But listeners are fallible, too. They listen in monotone, racing like a dictaphone to capture every word. Most students listen to a lecture as if every idea had equal weight. Not so. In an hour-long lecture, there will be at most only six or seven main points that you are expected to remember.

The rest of the information is detail, colorful anecdotes, relevant tangents or side dressings of opinion which the

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IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The "Macks"	6	2	ΘΔΧ Orgy	2	0	XΦC1	3	1
Economics	5	3	ΘΧΒ	3	1	ΘΔΧ Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan "A"	1	5	NRSA B	1	3	BOP "C"	0	2
Second West	1	8	ΠΔΦ "B"	0	3	Korean Stds	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔΤ "A"	6	1	Nodules	2	0	ΣΧC	3	0
ΔΤΔ "A"	6	2	ΚΣ "Ball. Hdlrs"	3	1	ΣΦEC1	2	0
Fiji "A"	5	3	ΣΧB	2	1	ΔΤΔ "GRRR"	2	1
Baker Bullets	4	3	ΦBE B	3	2	ΔΤ "C"	1	2
MacGregor	2	6	Fiji B	1	2	ΔΧA "C"	0	2
The Bojacks	0	8	ΦΔΘ	1	2	ΔKEC	0	3
A 2 Living Group			B 1			C 1		
Team	W	L	Team	W	L	Team	W	L
ΣAE "A"	6	0	ΦKΣ "B"	5	1	4th West	3	1
ΔΧA "A"	5	2	Burton Fives	4	2	EΘ "Snakes"	3	1
ΔKE "A"	4	2	From A to B	4	2	HoJo	3	1
2001	3	4	Nuclear Eng	3	3	Burton 1C	2	1
AEΠ	2	4	Vigilantes "B"	2	3	Sick Puppies	1	2
Chocolate City	2	5	BOP "A"	1	2	ΦKΣ	0	3
ΠΔΦ "XTC"	1	6	ΠK A	1	4	Coalition	0	3
B 1			C 2			C 3		
Team	W	L	Team	W	L	Team	W	L
ΦKΣ "B"	5	1	Air Force ROTC	5	0	Chinese Stds	4	0
Burton Fives	4	2	Les Tares	3	2	ΑΔΦ	3	1
From A to B	4	2	Vigilantes C1	3	2	Mallards	2	2
Nuclear Eng	3	3	E Prus Blue Boys	2	3	ΘΧC	2	2
Vigilantes "B"	2	3	7W Enforcers	2	3	Nudes Inc	1	3
BOP "A"	1	2	XMT Sports	0	5	K-Entry Killers	0	4
ΠK A	1	4	C 4			C 5		
Ashdown	1	4	Team	W	L	Team	W	L
B 2			C 3			C 5		
Team	W	L	Team	W	L	Team	W	L
Transports	4	0	ΘΣ	4	0	Thunderbolts	4	0
Chokin' Tokers I	4	0	Hillel Macabees	2	0	Tn City Tycoons	4	1
System Dynamics	3	3	Tetazoo	2	1	Aero-Astro	4	2
Hydros 2	2	2	B M F's II	2	2	Burton 5 Smokers	2	2
TEΦ "S & D's"	2	3	ΦK Celtics	1	2	B M F's I	2	3
Mac C	2	4	MacGregor E	1	3	Baker WPOD	0	4
N House V & II	2	4	Sp Inquisition	0	4	Roaches	0	4
ΣAE Bouncers	1	2	C 4			C 5		
B 3			C 4			C 5		
Team	W	L	Team	W	L	Team	W	L
B T B	3	0	ΘΣ	4	0	Thunderbolts	4	0
Hydros I	3	1	Hillel Macabees	2	0	Tn City Tycoons	4	1
ΣΦE "B"	2	1	Tetazoo	2	1	Aero-Astro	4	2
The Filters	2	2	B M F's II	2	2	Burton 5 Smokers	2	2
Datamen	1	3	ΦK Celtics	1	2	B M F's I	2	3
Club Latino	1	3	MacGregor E	1	3	Baker WPOD	0	4
New III Stooges	1	3	Sp Inquisition	0	4	Roaches	0	4
B 4			C 5			C 5		
Team	W	L	Team	W	L	Team	W	L
ΣAE B1	4	0	Thunderbolts	4	0	Thunderbolts	4	0
Did We Play	3	1	Tn City Tycoons	4	1	Tn City Tycoons	4	1
Sloan B	3	1	Aero-Astro	4	2	Aero-Astro	4	2
Abusers	3	2	Burton 5 Smokers	2	2	Burton 5 Smokers	2	2
AEΠ	2	3	B M F's I	2	3	B M F's I	2	3
LSD	1	2	Baker WPOD	0	4	Baker WPOD	0	4
Chem Eng	1	3	Roaches	0	4	Roaches	0	4
Burton H Tooley	0	5						

Fencing hopes to improve

By Jeanette Wing
(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)
Struggling to maintain a winning record has never been a problem for the MIT Women's Varsity Fencing Team (4-3) until this year. After a 13-3 loss to rival Radcliffe temporarily halted the team's winning (2-1) record of last December, MIT routed Concord-Carlisle 12-4 on January 11 for the second time in the team's

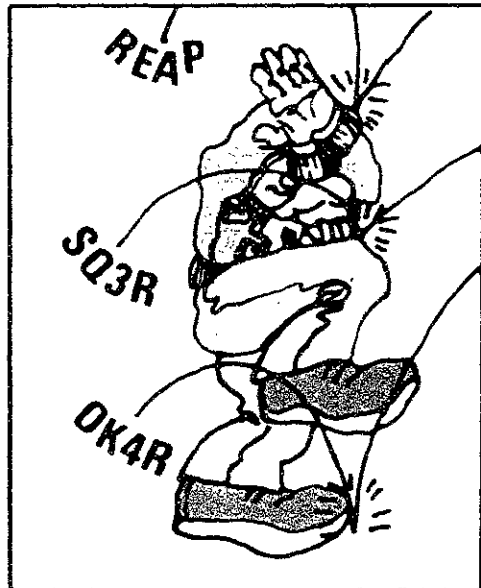
Following this victory the women split last weekend's meets, with a close defeat to Dartmouth 10-6 to again tie the win-loss record, and a comeback victory against SMU 9-7 to give the team a winning edge in the season record.
Saturday, SMU's weaker women were no match for the quicker and more aggressive MIT team. Captain Michelle Pretzman '79 won all three of her

tacks that left her motionless. Jeanette won the meet's round bout, also contributing wins, scoring most on feint-disengage. Meredith Boice '79 meet off with a bout added another win round. Julia Shimaing more carefully previous two bouts tance and watched

professor has included to clarify the main points for you. He hopes the extra information will tease you into greater awareness of those main points. He would be horrified to realize that most of his students miss those main points and remember the details instead.

You can pick out the main points by listening for cue phrases. Sometimes cues are very simple: "Our topic for today is..." the professor will say. But other times he will bury his cue in elaborate rhetoric, and you will have to figure out where the rhetoric ends and the main point begins: "Picture the day Lincoln arrived at Gettysburg in his dark top hat and cape, his shoulders stooped," the professor intones, and you wonder if this lecture is about Gettysburg, Civil War fashion, or curvature of the spine. Keep listening. He'll drop a cue eventually.

Cues for related subpoints can be very brief and are easily missed if you're not listening hard. Phrases like "on the other hand," "another way of looking at that," "next in importance," "turning now to," can signal a new point. Sometimes a single word — "however," "therefore," "but" — may introduce a point. You have to think as you listen, learning to differentiate the trivial from the important.



valuable than a less better organized, r sive and less likely text can't force you

Ah, But What C

One autumn w turned to campus. E. B. Greene gave exams they had before. Even "A" gotten 50 percent successfully memo fore. Another prof ton, found that s thirds of their alg after a year.

What's the use? study habits, you forget what you've get through tests, t all gone by next to dictaphone style, s a pointless exercise

In a 1932 book *chology of Study*, "If the student has merit, it lies in bein than a mere recordi something, he arg ability. You are most of what you le in all this is that so it, or at worst in spi think.

But what is th Mace could do in essay was suggesti might be involved. thinkers have strug tion, and among honest might be W who has said that t the thinking done largely a private m

So how is mem this private skill? that we can go all letter the not-y Aquinas wrote t: "Since you have, should set about t ure of knowledge, you concerning it should choose to way into the ocean little streams; fr ought to be reach ones.... Donot he is said, but rathe should commit to

Victor White, c letter, has written: St. Thomas is. E commit what is sa is not straightw intellect to it. H swallow everyth him remember it examine it, but no

Encoding Follows Naturally

Once listening is mastered, note-taking becomes absurdly simple. All you have to do is write down the main points, adding just as much detail as you care to for your own entertainment or clarification. Studies have been made of different note-taking styles, and the studies are, frankly, inconclusive. One study comparing four note-taking styles—a formal

outline method, a two-column format, the "Cornell three-column format" and "no special method"—revealed that none of the methods had any merit over the others. There were no differences in student grades attributable to note-taking methods.

But a study that compared students who did not take notes with those who did, revealed that note-takers always make better grades. It's not "how" but "whether" you take notes that counts. Why? None of the researchers ventured any answers, but it may be that note-taking is a form of encoding. Lectures make you select what's important (because you don't have time to get everything down), and they make you put the information down in your own words (because you don't have time to put it down in the professor's words). In lecture you become an encoder in spite of yourself. You're forced to do there what you should do for texts. Now wonder so many students feel they learn more in lectures. A text ought to be more

Two Unlikely Learning Techniques

Teaching Others

It's true. Teachers learn more from a course than the students. If you try to teach material to someone else, you are forced to grasp it in new ways, to express it in terms the other person can understand. This helps you remember. Tests at one university had a group of students study material using the SQ3R method. Another group also used the SQ3R method but was required to teach the material to other students. The student teachers did significantly better on tests than the control group. The catch in this technique is finding a "student" who is willing to learn biology or psychology or economics from you. But if you can talk someone into being your student,

you may learn more than you ever have before.

Mapping

Some people are just visually minded, so transforming a text or lecture into a picture or "map" might be the best way for these people to learn. To draw a map, put down the key idea first. This becomes the "buried treasure" on your map. Then draw in secondary or supporting ideas around the buried treasure. Lastly, draw in the critical details. Why this works is that you have to find the secondary and supporting ideas before you can draw them. In doing that you learn them. Mapping, as its author, M. Buckley Hanf, says, "is thinking." And the best way to learn mapping is to do it.

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Joseph D. Everingham

sets by
William Fregosi

costumes by
Cecelia Eller

lighting by
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Little Theatre, Kresge Auditorium, M.I.T.
Fri & Sat, Feb 10 & 11; Thurs, Fri, & Sat, Feb 16, 17, & 18
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Persons inter in these seminars shou Steve Rauden or John Terry at x3-5126. are limited. Education seminars will m Thur 3-4:30 in Room 20C-0

All three courses will be graded on a pass/fail carry with them 12 MIT units.

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before we have considered, examined, tested, proved."

St. Thomas Died in 1274

Memorization may seem more worthwhile to you if you perceive it, like Victor White does, as a tool of dispassion. Memorization is not commitment. It's just a way to hold onto thoughts as you sift through sometimes frightening new ideas looking

for the ones you will come to live by. Remember that—even if you can't remember when St. Thomas died. Meanwhile, you can be sure researchers will press on, looking for a memorizing formula you can live with.

Patricia Westfall, a contributing editor for Insider, spends snowed-in Iowa winters searching for the ultimate in study methods.

To Each His Own Study Method: Four Scholars Describe Theirs



No Time for Calculation

Chemical engineering senior Devon Clausing does everything she can to save time when studying for her classes at University of Cincinnati.

The president of one engineering club and active in two others, Clausing is forced to use what little study time she has very efficiently in order to maintain her 3.7 grade average.

"My freshman year I did all my homework every night," she said. "As I got more involved in activities, I didn't have time to do all of it. That's when I started finding shortcuts."

Most of an engineer's study time is spent working problems, she said. To save time, Clausing sets up the equations to solve the problems and makes sure she understands them, but she stops short of doing the actual calculations.

For non-engineering courses, Clausing will read assigned material before a class only if she expects the teacher to call on her for an answer. Otherwise, she prefers to read the material as time permits after the professor has lectured on it.

Clausing keeps books for non-engineering classes in the bathroom "by the john," and is "able to keep up pretty well that way."



Ready, Set, Write

For most students, writing papers at the last minute is a final act of desperation. For Katherine Donnelly, University of Chicago sophomore, it's just good strategy—one that produces "A" work.

When Donnelly has a paper to write, she reads over the relevant material two or three times and thinks deeply about her topic. Then she waits.

The night before the paper is due, Donnelly arranges her notes and books on an isolated library desk and sits down to write. The words pour out quickly and steadily, racing against the clock. When the frenzy subsides, Donnelly proofreads the paper she's created and tosses it into a folder, to be turned in the next day.

The California native says the best papers she's written have been produced in a last-minute flurry of activity.

One epic effort—a comparison of the themes of freedom and authority in *King Lear*, Kant, *Paradise Lost*, *The Federalist Papers* and Plato—was written in a fast four hours.

The last-minute papers almost always earn "A's," says Donnelly. Papers she writes over a long time period come

out sounding stilted and usually receive "B's." "When I'm under pressure to do it and I'm tired, I just say exactly what I want to say and get it over with," she says. "You don't have time to overthink."

Although her last-minute method has proven itself over and over again, Donnelly—a very conscientious student—has reservations about using it.

"I don't always trust it. Something inside me says, 'Don't leave it until the last minute.'"



Booking It

Roberta Rusch, a senior at St. John's College, won't have any tests this year, but she often spends six hours a day studying in the library—for the fun of it.

This self-motivation is typical of students at the small school in Annapolis, Maryland. The demanding St. John's curriculum emphasizes traditional liberal arts, such as grammar, logic and rhetoric. The reading list includes most of the "great books" of Western tradition.

There are no tests at St. John's, but grades based on papers, homework and class participation are recorded on each student's transcript. More important than grades, however, is the "don rag"—an annual oral evaluation of each student's progress.

Without the threat of impending exams, St. John's students must discipline themselves to study regularly, says Rusch.

"You've got to form habits. Once you're into the habit of regular study, it becomes a part of you," she adds. "I think basically people here like to study. We're interested in the books."



In the Swim

Yale University senior Dan Ortiz finds that swimming every day helps him study better.

"Keeping in shape and having that mental relaxation is good," he said. "It gives my mind an hour or so to rest."

"If I don't swim I start feeling heavy and fatigued. I begin fading out around 10 o'clock."

Ortiz, an English major whose grades earned him entry into Phi Beta Kappa honorary society, tries to break his study time into two- or three-hour blocks. He says he can't concentrate much longer than that. He also enjoys changes of scenery when he studies.

For writing, which he finds difficult, Ortiz holes up in "a rather sterile engineering library." He doesn't know many engineers, so he's not distracted by friends interrupting.

Sports

IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ B	3	0	Economics	3	0
The 'Macks'	6	2	QAX Orgy	2	0	XFC1	3	1
Economics	5	3	QXB	3	1	QAX Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
8-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan 'A'	1	5	NRSA B	1	3	BOP 'C'	0	2
Second West	1	8	PLA 'B'	0	3	Korean Stds.	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
AT A	6	1	Team	2	0	XXC	3	0
AT A	6	2	Nodules	2	0	SPEC1	2	0
Fiji 'A'	5	3	KΣ 'Ball. Hdlrs'	3	1	ATΔ 'GRRR'	2	1
Baker Bullets	4	3	XXB	2	1	Fiji	1	1
MacGregor	2	6	ΦBE B	3	2	AT 'C'	1	2
The Bojacks	0	8	Fiji B	1	2	AXA 'C'	0	2
A 2 Living Group			B 7			C 8		
Team	W	L	Team	W	L	Team	W	L
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ΔKE 'A'	4	2	Team	W	L			
2001	3	4	4th West	3	1			
AEΠ	2	4	EO 'Snakes'	3	1			
Chocolate City	2	5	HoJo	3	1			
PLA 'XTC'	1	6	Burton 1C	2	1			
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Team	W	L	ΦKΣ	0	3			
ΦKΣ 'B'	5	1	Coalition	0	3			
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Team	W	L	C 3					
Transports	4	0	Team	W	L			
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System Dynamics	3	3	ΔΔΦ	3	1			
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AEΠ	2	3	Baker WPOD	0	4			
LSD	1	2	Roaches	0	4			
Chem Eng	1	3						
Burton H Toey	0	5						

Fencing hopes to improve

By Jeanette Wing
(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)
Struggling to maintain a winning record has never been a problem for the MIT Women's Varsity Fencing Team (4-3) until this year. After a 13-3 loss to rival Radcliffe temporarily halted the team's winning (2-1) record of last December, MIT routed Concord-Carlisle 12-4 on January 11 for the second time in the team's

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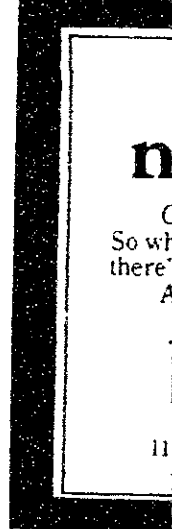
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A Compendium of Study Aids & Advice

by VICKI DENNIS

Grades are not necessarily synonymous with intelligence. Often the best students are the ones who have learned the tricks of the trade. Here are six study tips that could make the difference for you.

Use the Necessary Tools

Any tradesman needs special tools, and the college student is no different. The first tool is a

Get Acquainted with the Library

Don't wait till you have a big project to learn how to use the library. For starters, find out how the card catalog works. It consists of small wooden drawers full of alphabetical listings of all the library's holdings—arranged by author, title and subject headings. In the upper left-hand corner of each card, you'll find the "call number," which tells you the location of the book in the library. You should also become familiar with the reference room where encyclopedias and other general reference materials are located, including *The Reader's Guide to Periodical Literature*, a multivolumed listing of magazine articles grouped by ed indexes on subjects such

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Learn from Your Midterms

If you're alert, what you learn from a midterm can help you through the rest of the term and the final. For instance, the midterm lets you know what kinds of questions—and answers—the instructor prefers. Armed with this information, you can more easily isolate what you should learn for the final. In addition, a midterm lets you double-check your own study habits and note-taking skills. If you missed important points or found your notes impossible to comprehend, you can fine-tune your study technique or note-taking for the rest of the course. Finally, the midterm can tell you a lot about your test-taking skills. Did you run out of time? Were you calm or frantic? Were you able to organize your thoughts? Analyze your strong and weak points and work to improve your test performance before the final.

Check Out These Self-Help Study Guides

- *Study Tips: How To Study Effectively and Get Better Grades.* William H. Armstrong. (Woodbury, New York: Barron's Educational Series, Inc., 1975) \$2.25. A guide to organizing your study time.
- *Surviving the Undergraduate Jungle: The Student's Guide to Good Grades.* Kathy Crafts and Brenda Hauther. (New York: Grove Press, 1976) \$3.95. Teaches freshmen the art of collegiate self-defense.
- *How To Succeed in College: A Student Guidebook.* Joshua R. Gerow and R. Douglas Lying. (New York: Charles Scribner's Sons, 1975) \$4.95. A collection of advice and suggestions compiled by two college counselors after years of listening to students' complaints and problems.
- *Good Memory—Successful Student! A Guide To Remembering What You Learn.* Harry Lorayne. (New York: Stein and Day, 1976) \$1.95. Written by a well-known expert in memory techniques.
- *How To Take Tests.* Jason Millman and Walter Pauk. (New York: McGraw-Hill, 1969) \$2.95. Written by two nationally known authorities on tests and test-taking.
- *30 Ways To Improve Your Grades.* Harry Shaw. (New York: McGraw-Hill, 1969) \$3.95. All the way from "Uncovering Your Attitudes" to "Improve Your Test-Taking Methods."

Vicki Dennis collected study tips (and index cards) during graduate school.

Sports

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A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medell's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The 'Macks	6	2	QAX Orgy	2	0	XFC1	3	1
Economics	5	3	QXB	3	1	QAX Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan 'A'	1	5	NRSA B	1	3	BOP 'C'	0	2
Second West	1	8	PIAΦ "B"	0	3	Korean Stds	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔT 'A'	6	1	Nodules	2	0	ΣXC	3	0
ΔTΔ 'A'	6	2	KΣ 'Ball Hdlrs	3	1	ΣΦEC1	2	0
Fiji 'A'	5	3	ΣXB	2	1	ΔTΔ "GRRR"	2	1
Baker Bullets	4	3	ΦBE B	3	2	Fiji	1	1
MacGregor	2	6	Fiji B	1	2	ΔT 'C'	1	2
The Bojacks	0	8	ΦΔO	1	2	ΔXA 'C'	0	2
A 2 Living Group			B 1			C 8		
Team	W	L	Team	W	L	Team	W	L
ΣAE 'A'	5	0	Coalition	0	3	ΣXC	3	0
ΔXA 'A'	5	2				ΣΦEC1	2	0
ΔKE 'A'	4	2				ΔTΔ "GRRR"	2	1
2001	3	4				Fiji	1	1
AEH	2	4				ΔT 'C'	1	2
Chocolate City	2	5				ΔXA 'C'	0	2
PIAΦ 'XTC'	1	6				ΔKEC	0	3
B 2			C 1			C 2		
Team	W	L	Team	W	L	Team	W	L
Transports	4	0	4th West	3	1	Air Force ROTC	5	0
Chokin Tokers I	4	2	EΘ "Snakes	3	1	Les Tares	3	2
System Dynamics	3	3	HoJo	3	1	Vigilantes C1	3	2
Hydros 2	2	2	Burton 1C	2	1	E Prus Blue Boys	2	3
TFΦ S & D's	2	3	Sick Puppies	1	2	7W Enforcers	2	3
Mac C	2	4	ΦKΣ	0	3	XM1 Sports	0	5
N House V & II	2	4	Coalition	0	3			
ΣAE Bouncers	1	2						
B 3			C 3			C 4		
Team	W	L	Team	W	L	Team	W	L
BIB	3	0	Team	4	0	ΘΣ	4	0
Hydros I	3	1	Chinese Stds	4	0	Hillel Macabees	2	0
ΣΦE 'B'	2	1	ΔΔΦ	3	1	Tetazoo	2	1
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Datamen	1	3	ΦXC	2	2	ΦK Celtics	1	2
Club Latino	1	3	Nudes Inc	1	3	MacGregor E	1	3
New III Stooges	1	3	K-Entry Killers	0	4	Sp Inquisition	0	4
B 4			C 5			C 6		
Team	W	L	Team	W	L	Team	W	L
ΣAE B1	4	0	Thunderbolts	4	0	Economics	3	0
Did We Play	3	1	Tr City Tycoons	4	1	XFC1	3	1
Sloan B	3	1	Aero-Astro	4	2	QAX Outhouse	2	1
Abusers	3	2	Burton 5 Smokers	2	2	Vigilantes C2	2	1
AEH	2	3	B M F's I	2	3	English House	1	3
LSD	1	2	Baker WPOD	0	4	BOP 'C'	0	2
Chem Eng	1	3	Roaches	0	4	Korean Stds	0	3
Burton H. Toovey	0	5						

Fencing hopes to improve

By Jeanette Wing
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How To Play the Test Game—and Win

by DON EASTMAN

In his keynote address to the delegates at the annual meeting of the American Council of Education last summer, Ernest Boyer, the U.S. Commissioner of Education, related how his five-year-old son had become testwise.

The boy had been attending kindergarten less than a week when, instead of saying his nightly prayers, he launched into a recitation of the alphabet. "I realized the educational implications of this recitation," said Boyer, "and was filled with fatherly pride at my son's accomplishment."

Embarrassed by his father's praise for learning the alphabet in less than a week in kindergarten, the boy confessed, "I actually learned it on *Sesame Street*, but my teacher thinks she taught it to me."

"Ah, then I was doubly proud," said Boyer, "for he had not only learned the alphabet, but he had learned the system as well."

Like most educators, Boyer understands that American education consists of two distinct parts: there is learning, and there is the game of learning.

No one is quite sure whether testing and grading, which occupy a remarkable portion of time and energy in the American educational system, measure learning—or simply the ability of students to make grades and pass tests. It is clear, however, that students who know how to play the game of education—that is, who know how to take tests and make good grades—quickly achieve a favored status in our society. The testwise

student knows and uses the rules of the game; whether he is actually learned or not, he is the declared winner in the educational sweepstakes.

The first matter to consider, and to come to terms with, is the quite obvious fact that formal education is

American education consists of two distinct parts: there is learning, and there is the game of learning.

not a monolithic, unified, univocal experience, but a series of courses taught by individuals. The act of taking a course is quite similar, for good historical and psychological reasons, to a brief apprenticeship. What one is asked to do in taking a course is to see the particular subject matter through the eyes of the instructor. You may have, or may develop, additional perspectives as well, but what the course is about, and what you will be graded on, is your ability to see the subject matter from the instructor's perspective.

Once this notion is understood, we can forget all those silly arguments about how five different English teachers will grade the same theme in five different ways, which is supposed to be an argument against the validity of testing and grading. Of course they are all different: nobody knows what

the truth is. All English teachers (and teachers), has to go is, a single, limited, of what the truth is like grades and tests individual matter.

Obviously, the educational system particularly high depends upon the goodly number of ticeships. Each provides a different pe from a different ar the student is luck industrious, is what called the ability t and see it whole."

The first rule of is: *Identify the p instructor.* What and the key approach according to Profe thing you can to spective: look up fraternity house; c the University Cer dents who have before and grill the instructor for cop "just for practice" structor repeatedly possible about wha be given and what will be covered. You attend class from ti up organizational

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Little Theatre, Kresge Auditorium, M.I.T.
Fri & Sat, Feb 10 & 11; Thurs, Fri, & Sat, Feb 16, 17, & 18
at 8 PM

All seats \$2.50 (exc. opening night, Feb 10 — \$1.50)
Reservations: 253-4720

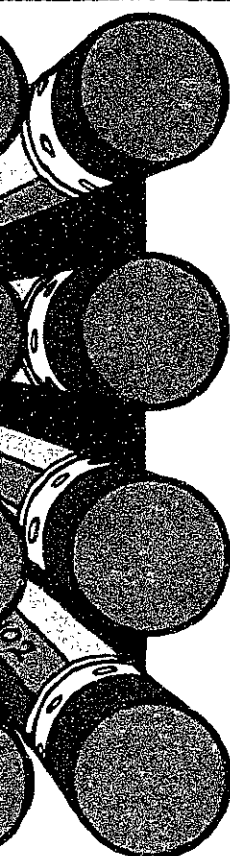
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When the test is to

be short answer, multiple choice, fill-in-the-blanks, true-false or "machine graded," concentrate on developing thematically arranged lists of the bits and pieces of the subject on which such tests depend. If the test will consist of problem-solving questions, devise representative hypothetical problems and prepare model solutions. If the test is an essay in form,

What you will be graded on is your ability to see the subject matter from the instructor's perspective.

prepare sample essays on an appropriate variety of the topics to be tested and drill yourself on the important points and illustrations for each.

The key to these exercises is practice, practice, practice. You want to take aim on a test the way the football team prepares for a game: run the plays you think will work until they become almost automatic. Then, when the time comes, use what you've practiced if at all possible. Particularly in the case of essay tests, it is frequently possible to revise or redirect the question to fit the answer you came prepared to write. If you have prepared an adequate sample of answers to a reasonable guess about what the questions will be, it is more than likely that many of those answers, with their finely tuned arguments, comparisons, illustrations, observations and conclusions, can be employed to advantage.

While you're at it, try a team approach. Though some amount of individual reading and study is unavoidable, frequently the most productive way to prepare is to form a team with one or two other students in the class. The team approach not only provides a division of labor for writing sample essays or making lists of key facts, dates or formulae, it also prevents you from becoming locked inside your own head and requires the kind of objective expression and discussion that the test will require later. Frequently, students who study alone develop a deceptive kind of inner monologue: they hear the material in their head, think they know it, but come test time they are unable to verbalize it.

The team study approach can offer a way out of the box of solipsism (particularly when employed during the entire course) and is perhaps the surest way to respond to Rule Number Three of the test game: *Don't fool*

yourself about what you do and don't know. The opportunity to discuss and criticize the sample answers is an excellent way to assess your grasp of the subject matter.

Rule Number Four is a corollary to Number Three: *Know what you can and cannot say about a subject in a given period of time.* (Obviously, this rule applies primarily to essay and discussion tests.) How many paragraphs can you write in 10 minutes, 30 minutes, and 60 minutes? Essay answers consist of an opening paragraph to state the problem (as you think it ought to be stated), a concluding paragraph to display how you have dealt with the problem in a significant way, and a variable number of intermediate paragraphs depending on the time allotted and your own particular writing speed. Again, a little practice with sample essays will tell you a lot.

Once the test itself has begun, most of the rules of the test game are common sense:

Rule Five: *Read the directions and test questions very carefully.* Make sure you understand the kinds of answers expected, and how they will be scored. Ask the examiner for help when you do not understand the directions.

Rule Six: *Budget your time.* Always take a watch to the test so you can periodically check to make sure you are working rapidly enough to answer all the questions. Try to save a few minutes to review your answers at the end of the test—so you can make corrections and add details. Remember that most tests attempt to evaluate not only your knowledge of the subject matter, but also your ability to organize that knowledge quickly and efficiently.

Rule Seven: *Answer the "easy" questions first.* If you go through the entire test answering those questions for which you are best prepared, you may be able to budget more time for the questions which will require more reflection and labor.

Rule Eight: *Answer every question.* You should attempt at least a partial answer even to those questions which draw a blank (except in the case of some machine-scored tests which penalize "guesses").

Many students give up too soon on questions which do not elicit an immediate response. Reread the question with care, and wait (briefly) for something to come. Visualize the place where you studied for this test: frequently you can find a clue stuck on the wall above your desk, or recall an irrelevant image that will provoke a more useful thought or impression.

Rule Nine: *There is a difference between a correct answer and a best answer.* It is on this difference that many multiple choice questions depend (e.g., D. H. Lawrence was (a) a poet (b) a novelist (c) a sex fiend (d) the British author of *Sons and Lovers*, *Women in Love* and *Lady Chatterley's Lover*), but essay tests also exploit this distinction to discriminate between varying levels of comprehension (e.g., "What were Monet's primary contributions to Impressionism?").

Take care to select the *best* answer from those which are available.

Rule 10: *Write legibly and clearly.* There is no truth to the widespread rumor that graders give the student the benefit of the doubt on answers they cannot read. Answers should be double-spaced, with wide margins, and should employ the most concise, straightforward syntax possible.

The last two rules are less obvious than the others, but no less important:

Rule 11: *The proper response to a test is not a mechanical reissuing of information, but a performance.* Many students regard tests as cruel and unusual punishment to be endured as stoically and passively as possible, or as a kind of machine-like exercise in which they are required to regurgitate (the image illustrates the attitude) in a routine fashion the same material the teacher recited to them.

It is almost impossible to perform well on tests with such an attitude. A negative or, at best, neutral approach is inherently self-defeating.

The test must be viewed as a performance in which knowledge (the subject matter) is shaped according to demand (the test questions) and necessity (the time limits).

View yourself as a performer who is ready and willing to display your wares, to argue vehemently and passionately, to match wits with the test,

Take a lesson from the football team: practice the plays you think will work until they become automatic.

and to take on all comers. This is essential for three reasons: it will sustain your efforts to prepare adequately; it will provide you with persistence and energy to assemble an answer to a difficult test question that you didn't anticipate; and it will kindle the alertness and determination needed to do your best.

continued on page 14

sports

IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The "Macks"	6	2	ΘΔΧ Orgy	2	0	XΦ C1	3	1
Economics	5	3	QX 8	3	1	ΘΔΧ Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan "A"	1	5	NRSA 8	1	3	BΘΠ "C"	0	2
Second West	1	8	ΠΔΦ "B"	0	3	Korean Stds.	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔT "A"	6	1	Team	2	0	ΣΧ C	3	0
ΔTΔ "A"	6	2	Nodules	2	0	ΣΦEC1	2	0
Fiji "A"	5	3	KΣ "Ball. Hdlrs."	3	1	ΔTΔ "GRRR"	2	1
Baker Bullets	4	3	ΣΧ 8	2	1	Fiji "C"	1	1
MacGregor	2	6	ΦBE B	3	2	ΔT "C"	1	2
The Bojacks	0	8	Fiji B	1	2	ΔXA "C"	0	2
A 2 Living Group			B 1			C 8		
Team	W	L	Team	W	L	Team	W	L
ΣAE "A"	6	0	Team	0	4	T 1	1	1
ΔXA "A"	5	2	C 1			V 1	1	1
ΔKE "A"	4	2	Team	3	1	D 1	1	1
2001	3	4	4th West	3	1	E 1	1	1
AEB	2	4	EΘ "Snakes"	3	1	E 1	1	1
Chocolate City	2	5	HoJo	3	1	Θ 1	1	1
ΠΔΦ "XTC"	1	6	Burton 1C	2	1	N 1	1	1
B 1			C 2			C 9		
Team	W	L	Team	W	L	Team	W	L
ΦKΣ "B"	5	1	Air Force ROTC	5	0	T 1	1	1
Burton Fives	4	2	Les Tares	3	2	V 1	1	1
From A to B	4	2	Vigilantes C1	3	2	D 1	1	1
Nuclear Eng	3	3	E Prus. Blue Boys	2	3	E 1	1	1
Vigilantes "B"	2	3	7W Enforcers	2	3	B 1	1	1
BΘΠ "A"	1	2	XM1 Sports	0	5	C 1	1	1
ΠKA	1	4				C 1	1	1
Ashdown	1	4				C 1	1	1
B 2			C 3			C 10		
Team	W	L	Team	W	L	Team	W	L
Transports	4	0	Team	4	0	B 1	1	1
Chokin' Tokers I	4	2	Chinese Stds	4	0	K 1	1	1
System Dynamics	3	3	ΑΔΦ	3	1	L 1	1	1
Hydros 2	2	2	Mallards	2	2	C 1	1	1
Ti Φ "S & D's"	2	3	ΘX C	2	2	D 1	1	1
Mac C	2	4	Nudes Inc	1	3	T 1	1	1
N House V & II	2	4	K-Entry Killers	0	4	V 1	1	1
ΣAE Bouncers	1	2				M 1	1	1
B 3			C 4			C 11		
Team	W	L	Team	W	L	Team	W	L
BT B	3	0	Team	4	0	N 1	1	1
Hydros I	3	1	ΘΣ	2	0	C 1	1	1
ΣΦE "B"	2	1	Hillel Macabees	2	1	D 1	1	1
The Filters	2	2	Tetazoo	2	1	T 1	1	1
Datamen	1	3	B M F's II	2	2	V 1	1	1
Club Latino	1	3	ΦK Celtics	1	2	B 1	1	1
New III Stooges	1	3	MacGregor E	1	3	C 1	1	1
B 4			C 5			C 12		
Team	W	L	Team	W	L	Team	W	L
ΣAE B1	4	0	Thunderbolts	4	0	T 1	1	1
Did We Play	3	1	Tn City Tycoons	4	1	B 1	1	1
Sloan B	3	1	Aero-Astro	4	2	C 1	1	1
Abusers	3	2	Burton 5 Smokers	2	2	V 1	1	1
AEII	2	3	B M F's I	2	3	B 1	1	1
LSD	1	2	Baker WPOD	0	4	C 1	1	1
Chem Eng	1	3	Roaches	0	4	T 1	1	1
Burton H Tooley	0	5				D 1	1	1

Fencing hopes to improve

By Jeanette Wing
(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)

Struggling to maintain a winning record has never been a problem for the MIT Women's Varsity Fencing Team (4-3) until this year. After a 13-3 loss to rival Radcliffe temporarily halted the team's winning (2-1) record of last December, MIT routed Concord-Carlisle 12-4 on January 11 for the second time in the team's

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tacks that left her opponent motionless. Jeanette Wing won the meet's ninth deciding bout, also contributing three to wins, scoring most of her touch on feint-disengage attacks. Meredith Boice '78 started meet off with a bout win 5-1 and added another win in the round. Julia Shimaoka '80, fencing more carefully than in previous two bouts, kept her



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FORD DIVISION 75th ANNIVERSARY

SPORTS

IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The 'Macks	6	2	QAX Orgy	2	0	XΦC1	3	1
Economics	5	3	QX B	3	1	QAX Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan 'A'	1	5	NRSA B	1	3	BOP 'C'	0	2
Second West	1	8	ΠΔΦ "B"	0	3	Korean Stds.	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔT 'A'	6	1	Nodules	2	0	SXC	3	0
ΔTΔ 'A'	6	2	KΣ 'Ball. Hdlrs	3	1	SΦEC1	2	0
Fiji 'A'	5	3	SXB	2	1	ΔTΔ "GARR"	2	1
Baker Bullets	4	3	ΦBE B	3	2	Fiji	1	1
MacGregor	2	6	Fiji B	1	2	ΔT "C"	1	2
The Bojacks	0	8	ΦΔΘ	1	2	AXA "C"	0	2
			B-liers	0	4	ΔKEC	0	3
A 2 Living Group			C 1			C 8		
Team	W	L	Team	W	L	Team	W	L
ΣAE "A"	6	0	4th West	3	1	1s	1	1
ΔXA "A"	5	2	EΘ "Snakes"	3	1	W	3	0
ΔKE "A"	4	2	HoJo	3	1	D	2	0
2001	3	4	Burton 1C	2	1	P	1	1
AEP	2	4	Sick Puppies	1	2	E	1	1
Chocolate City	2	5	ΦKS	0	3	Θ	1	2
ΠΔΦ "XTC"	1	6	Coalition	0	3	N	0	2
B 1			C 2			C 8		
Team	W	L	Team	W	L	Team	W	L
ΦKS "B"	5	1	Air Force ROTC	5	0	Co	3	0
Burton Fives	4	2	Les Tares	3	2	Se	2	0
From A to B	4	2	Vigilantes C1	3	2	X	1	1
Nuclear Eng	3	3	E Prus Blue Boys	2	3	Co	1	1
Vigilantes B	2	3	7W Enforcers	2	3	Se	1	1
BOP A	1	2	XM1 Sports	0	5	X	1	1
IKKA	1	4	C 3			Co	1	1
Ashdown	1	4	Team	W	L	Se	1	1
B 2			Chinese Sids	4	0	X	1	1
Team	W	L	ΔΔΦ	3	1	Co	1	1
Transports	4	0	Mallards	2	2	Se	1	1
Chokin Tokers i	4	2	ΦX C	2	2	X	1	1
System Dynamics	3	3	Nudes Inc	1	3	Co	1	1
Hydros 2	2	2	K-Entry Killers	0	4	Se	1	1
TEΦ S&D's	2	3	C 4			X	1	1
Mac C	2	4	Team	W	L	Co	1	1
N House V & II	2	4	Thunderbolts	4	0	Se	1	1
ΣAE Bouncers	1	2	Tn City Tycoons	4	1	X	1	1
B 3			Aero-Astro	4	2	Co	1	1
Team	W	L	Burton 5 Smokers	2	2	Se	1	1
BTB	3	0	8 M F's I	2	3	X	1	1
Hydros I	3	1	Baker WPOD	0	4	Co	1	1
SΦE "B"	2	1	Roaches	0	4	Se	1	1
The Filters	2	2	C 5			X	1	1
Datamen	1	3	Team	W	L	Co	1	1
Club Latino	1	3	Thunderbolts	4	0	Se	1	1
New III Stooges	1	3	Tn City Tycoons	4	1	X	1	1
B 4			Aero-Astro	4	2	Co	1	1
Team	W	L	Burton 5 Smokers	2	2	Se	1	1
ΣAE B1	4	0	8 M F's I	2	3	X	1	1
Did We Play	3	1	Baker WPOD	0	4	Co	1	1
Sloan B	3	1	Roaches	0	4	Se	1	1
Abusers	3	2	C 5			X	1	1
AEP	2	3	Team	W	L	Co	1	1
LSD	1	2	Thunderbolts	4	0	Se	1	1
Chem Eng	1	3	Tn City Tycoons	4	1	X	1	1
Burton H Tooley	0	5	Aero-Astro	4	2	Co	1	1

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continued from page 11

The logic and psychology of this rule are simple: students who view tests as punishment, and those who view tests as performances, each get what they are looking for.

Rule 12 is a relatively new one: When shafted, appeal. Unfortunately, many professors are like St. Augustine, who prayed, "For so it is, O Lord my God, I measure it; but what it is I measure, I do not know." There is

an extraordinary amount of inept testing: a recent book published by *Change* magazine entitled *The Teaching and Grading of Students* delivers a wholesale indictment of testing practices in higher education.

The bad news is that most professors are enormously unsophisticated about constructing tests; the good news is that many of them admit this openly. When presented with a convincing argument that a particular

test question is an leading, inaccurately unfair, many professors to make some kind. Most professors do themselves experts cognitive measurements are (or consider the primarily experts in a demic discipline—physics or accounting, or what only secondarily (and grudgingly) responsible for student performance. believe you have been unfairly, you should discuss the complaint instructor. Frequentiations will be productive will alter the grade question, or you will be.

For students who followed their intuition, many institutions opened in recent years procedure for handling appeals. These appeals usually available to a lodges a charge of unfair, capricious or discrimination. Many institutions an "ombudsman" to resolve both personal problems and complaints.

College students have retained a healthy skepticism the ultimate value grading. Like most realize (perhaps unconsciously) no one really knows relationship between merit and learning is. Observing the 12 rules described above will poor student a superpower, however, a set of practices which will assist in performing on tests a true abilities.

Finally, while testably a game, don't that it is a challenging fascinating game probably high stakes, and teaching you at least solving life's problems rigorous course is. Analysis or Synthesis. The kind of thinking rapid organization well under stress may be of greater importance particular details of study. Such thinking what a college education

Don Eastman, an taker, claims he applied every rule in much success.

A Concise Guide to 12 Kinds of Tests

Demonstration. In lab courses, you may be expected to show the instructor that you can perform certain basic operations, such as preparing a microscope slide. The only way to study for this is to practice the operation regularly in class until you're certain you are doing it correctly.

Essay. The first thing to do on an essay exam is to read each question carefully—watching for words like *explain*, *compare*, *describe*, *analyze*, *contrast*—and be sure you understand what you're being asked to do. If the question says to *compare* two items, it won't do to simply *describe* them. Then work your way from the easiest questions to the hardest questions, being careful to think through each answer before you write it. An effective technique is to use as many specific names and references as you can. If the professor gives your answer only a surface reading, these buzz words may make your answers seem that much more credible. If you run out of time, write outline answers.

Fill-in-the-Blank. Sometimes called "completion" exams, such tests require you to provide the correct word or phrase that completes the statement. One way to study for this type of test is to organize the material into definitive statements as you go.

Identification. You usually find such tests in the lab sections of science courses. You're shown a collection of specimens which you have to identify and provide information about. The way to prepare is to memorize several distinguishing characteristics for each item. Another type of identification test provides the name of a person or place and asks you to supply as many facts about that person or place as you can.

Matching. The task here is to associate an item on one list with its complement on another list—for instance, matching people's names with their accomplishments, words with definitions and the like. Obviously, you should first match the items you are most sure of and then, unless there's a penalty for guessing, match the remaining items through the process of elimination. Check the instructions before you start: can any of the "answers" be used more than once?

Multiple Choice. Theoretically such tests should be easy because the answer is one of the alternatives and through elimination you should be able to figure out which one. A common mistake people make is to choose the first statement that seems right without reading the rest—the object of many such tests is to choose the *best* answer from more than one correct statement.

Open Book. Most open book exams are constructed in such a way that you cannot readily find the answer in the textbook. For example, you may be told to analyze the facts or interpret them in some way. Nonetheless, the book can help you recall buzz words and phrases.

Oral Exams. These are probably the hardest of all exams because most people are better at padding their writing than their speech. Do not attempt to bluff your way through a question you're not prepared to answer. Instead, when a question is asked, consider for a moment what you *can* talk about with some assurance and then proceed with such enthusiasm that the professor is reluctant to redirect you.

Problem Solving. The best way to study for such exams is to work practice problems until you are confident that you understand how to work the formula in all cases. When you finish each problem on the test, recheck each step of the answer to be sure you haven't made a mistake. Then label your answer to help the grader find it.

Short Answer. This kind of test requires you to answer each question in several sentences rather than the longer answer required on an essay exam. You study for it much as you do for an essay exam.

Take Home. This type of exam is really a series of short themes which you prepare outside of class, using whatever resources you want. Profs usually set a limit on the amount of time you are to spend writing the exam, but students who score high often exceed this time limit considerably. The professor expects you to produce well-crafted answers when you're working with both books and time in the quiet of your own room.

True-False. You read a statement and pronounce it true or false. It's as simple as that. Don't try to interpret a statement too closely—most true-false questions are clearly stated—but do look out for words like *always*, *never* or *only* which usually indicate that the statement is false.

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Ins and Outs of Cramming

Europe's first universities appeared in the 12th century. The final examination originated at about the same time, and no doubt, the first students to take finals were also the first students to cram for them.

Both the final exam and cramming retain some of the flavor of their medieval origins: the final bears obvious resemblances to the Inquisition and the torture rack; the all-night vigil evokes images of burning the midnight oil, and candles at both ends.

Though the preponderance of professorial opinion and scientific study through the centuries has been anti-cramming—and occasionally scholars express wonder at the persistence of the custom—the purpose of cramming is quite obvious. Without it, student life as we know it today could not exist. Cramming separates the diligent from the casual student and enables the latter to have fulfilling and amusing college careers, while the studious consistently make the grades.

Even conscientious scholars cram occasionally—or at least, they claim to be cramming, even though everyone knows they have been reading two chapters a night since the first day of class and typing their lecture notes onto 3 x 5 cards. "Cramming" means different things to different folks.

Let's define the terms. *Cramming* refers to any last-minute, last-ditch effort to master an abundance of new material. The word "new" is key. For the purpose of this treatise, cramming is different from *final reviewing*, any last-minute, last-ditch effort to organize and brush up on previously learned material. An *all-nighter* is any last-minute, last-ditch effort of studying or term-paper writing, as a result of which the effortee sleeps less than four hours. (For our purposes, you need not actually see the rosy-fingered dawn to qualify; it's the thought, or lack of it, that counts.)

Now with a firm grasp on the definitions, let us state unequivocally the facts of the matter:

1. Cramming, despite its usefulness as a social institution, is useless as a means of passing final exams.
2. Final reviewing, on the other hand, is an extremely useful study tool that works with moderate to high success.
3. All-nighters are a common and harmless tool for writing term papers, but all-nighters and exams go together like oil and water.

If you insist upon cramming, as

The more you
learn,
the more you
forget.

The more you
forget,
the less you
know.

So why study?

by DON AKCHIN

defined, we offer you no encouragement, only a sincere "good luck" and a prayer that your departure from the university will be as painless and trauma-free as possible, under the circumstances. Sorry, kid, it just doesn't cut the mustard. Here's why.

The Mechanics of Memory

The brain seems to have two memory systems, short-term memory and long-term memory. Information in short-term memory has this nasty habit of dissolving into nothingness in 24 hours or less. Also, short-term memory has a space shortage. When some new information comes in and there's no room, some of the old information gets bumped out, never to be seen or heard from again.

Cramming information into short-term memory obviously won't do. The more you learn, the more you forget. The more you forget, the less you know. So why study?

Your only hope is to arrange a fast transfer from short-term memory to long-term memory, a permanent storage vault with unlimited space capacity. The way to do that, apparently, is to rehearse the information several times. This labels it as something you intend to keep. But if you're pushed for time, the transfer may not reach long-term memory in time. The scientific evidence indicates it takes awhile for long-term memory to consolidate new input. Some of the evidence suggests that sleep helps the consoli-

dation (a point which has a bearing on the wisdom of all-nighters). Some scientists theorize that dreams are the transfer itself—instant replays of the day's short-term memory holdings, broken down in smaller bits and on their way to cold storage in long-term memory.

Most cramsters never get the material past short-term memory; it may or may not hang around there long enough to do any good on the test.

Several other facts about learning work against cramming. One is the problem of interference—when you learn something new, it may cause you to forget something old. If you study all night and then stop to talk to a friend on your way to class, the conversation is new input that may interfere with what you just memorized—especially if it's still bouncing precariously in short-term memory. Another fact is that it's far easier to relearn something you already knew once than to start from the beginning.

For many students the difference between a cram and a review is a good set of lecture notes. Even if you don't look at your notes until just before tests, the concentration and effort you exerted to listen and then write down what you heard—in your own words—means you learned it. Every word may not be in long-term memory, but a large chunk of it probably is, just waiting for you to pluck it out.

The most "scientific" way to study, then, would be to review your notes and books the very last thing at night. Then go directly to bed (no interference) and "sleep on it." That should consolidate the new information into long-term memory. In the morning recite once or twice to be sure it's all there.

The professorial wisdom on cramming is summed up by this advice from a campus psychologist: "I'm for cramming at the beginning. If you really want to learn well, read the material three or four times at the start of the quarter. If you learn it well then, you'll only have to review it."

In the best of all possible worlds, every student would follow this sage advice. But then, in the best of all possible worlds, every college student would study for the pure joy of seeking knowledge and final exams would be unnecessary.

Staff writer Don Akchin had a successful college career and promptly forgot everything.

Sports

IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The "Macks"	6	2	ΘΔΧ Orgy	2	0	XΦC1	3	1
Economics	5	3	ΘXB	3	1	ΘΔΧ Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan "A"	1	5	NRSA B	1	3	BΘΠ "C"	0	2
Second West	1	8	ΠΔΦ "B"	0	3	Korean Stds.	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔT "A"	6	1	Team	2	0	ΣXC	3	0
ΔTΔ "A"	6	2	Nodules	2	0	ΣΦEC1	2	0
Fiji "A"	5	3	KΣ "Ball. Hdrs"	3	1	ΔTΔ "GRRR"	2	1
Baker Bullets	4	3	ΣXB	2	1	Fiji	1	1
MacGregor	2	6	ΦBE B	3	2	ΔT "C"	1	2
The Bojacks	0	8	Fiji B	1	2	ΔXA "C"	0	2
A 2 Living Group			B 1			C 1		
Team	W	L	Team	W	L	Team	W	L
ΣAE "A"	6	0	Team	0	4	Te		
ΔXA "A"	5	2	4th West	3	1	1s		
ΔKE "A"	4	2	EΘ "Snakes"	3	1	W		
2001	3	4	HoJo	3	1	Dr		
AEΠ	2	4	Burton 1C	2	1	El		
Chocolate City	2	5	Sick Puppies	1	2	Θ		
ΠΔΦ "XTC"	1	6	ΦKΣ	0	3	Ni		
B 1			C 2			C 2		
Team	W	L	Team	W	L	Team	W	L
ΦKΣ "B"	5	1	Air Force ROTC	5	0	Co		
Burton Fives	4	2	Les Tares	3	2	Se		
From A to B	4	2	Vigilantes C1	3	2	X		
Nuclear Eng	3	3	E Prus Blue Boys	2	3	"C"		
Vigilantes "B"	2	3	7W Enforcers	2	3	Bl		
BΘΠ "A"	1	2	XMI Sports	0	5	A		
ΠK.A	1	4				Ja		
Ashdown	1	4				C		
B 2			C 3			C 3		
Team	W	L	Team	W	L	Team	W	L
Transports	4	0	Team	4	0	Ar		
Chokin Tokers I	4	2	Chinese Stds	4	0	A		
Systm Dynamics	3	3	ΔΔΦ	3	1	St		
Hvdros 2	2	2	Mallards	2	2	B		
TEΦ "S & D's"	2	3	ΘXC	2	2	K		
Mac C	2	4	Nudes Inc	1	3	Le		
N House V & II	2	4	K-Entry Killers	0	4	"C"		
ΣΔL Bouncers	1	2				D		
B 3			C 4			C 4		
Team	W	L	Team	W	L	Team	W	L
BTB	3	0	Team	4	0	Te		
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Abusers	3	2	Burton S Smokers	2	2	Ch		
AEΠ	2	3	B M F s I	2	3	Va		
LSD	1	2	Baker WPOD	0	4	Bu		
Chem Eng	1	3	Roaches	0	4	2nd		
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Fencing hopes to improve

By Jeanette Wing
(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)
Struggling to maintain a winning record has never been a problem for the MIT Women's Varsity Fencing Team (4-3) until this year. After a 13-3 loss to rival Radcliffe temporarily halted the team's winning (2-1) record of last December, MIT routed Concord-Carlisle 12-4 on January 11 for

Following this victory the women split last weekend's meets, with a close defeat to Dartmouth 10-6 to again tie the win-loss record, and a comeback victory against SMU 9-7 to give the team a winning edge in the season record.
Saturday, SMU's weaker women were no match for the quicker and more aggressive MIT team. Captain Michelle Pret-

tacks that left her motionless. Jeanette won the meet's bout, also contributing wins, scoring most on feint-disengage. Meredith Boice '77 meet off with a bout added another win round. Julia Shimada more carefully previous two bouts.

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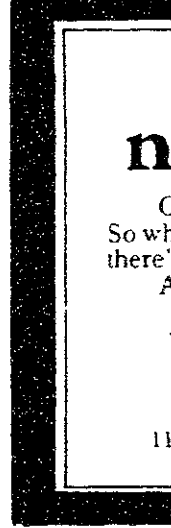
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Do you worry about exams weeks in advance? Have trouble concentrating when you study? Before, during and after exam week, do you show such signs of stress as rapid heartbeat, nausea or dizziness? If so, you just might have a condition known as "test anxiety."

College psychologists studying this phenomenon over the past few years estimate that 20 percent of all college students have moderate cases of test anxiety—enough to lower their grade point averages by one full point. As many as half of these students may have anxiety serious enough to require treatment in the form of behavior modification.

One psychologist who pioneered in the diagnosis and treatment of test anxiety is Dr. Richard M. Suinn, head of the Department of Psychology at Colorado State University in Fort Collins and psychologist for the U.S. Olympic Ski Team.

Suinn is quick to emphasize that some degree of anxiety is good. "Moderate anxiety can facilitate maximum performance by leading to increased motivation, heightened alertness and greater concentration," he says.

Dr. Carol Schneider of Colorado University's Student Health Center puts it this way, "If you don't have enough anxiety, you don't study. If too much, you perform badly despite good preparation."

What causes test anxiety? As with many stress-related conditions, the causes are varied: your teachers and parents may expect too much, you may be an over-achiever, you may have an excessive need to please people or too much fear of failure.

Lower-than-expected grades and occasional panic are not necessarily indicators of test anxiety. For example, suppose you came from a small high school where the academic demands were relaxed, where you were number one without having to try very hard. Suddenly, you find yourself in a college environment where your classmates are the pick of big-city high schools, where the courses are tough and faculty demands high, where competition is

great and grading is hard. You find yourself struggling to get "C's" instead of the "A's" you were used to. Your lower grades may or may not be attributable to test anxiety.

However, you might be among the test-anxious if you display some of the following symptoms:

- Midway through a test, you find yourself looking around, wondering how other people are doing, worrying about failing the test and wondering what will happen if you do.

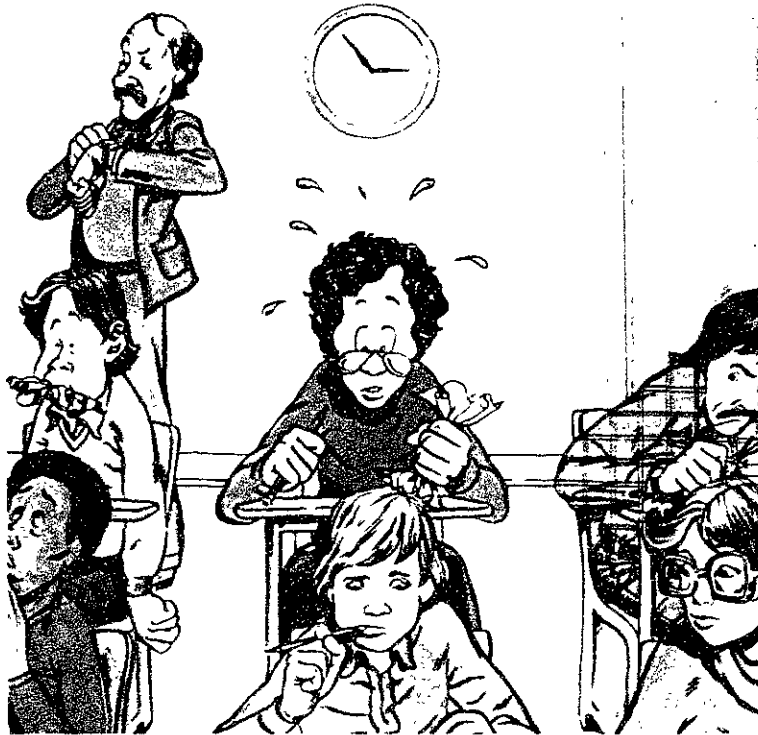
- When you read test questions, the words are meaningless. You have to re-read the questions two and three times to comprehend them.

- During tests you are plotting ways to escape—sneaking out, turning in a blank test, fainting.

- You often wish you were out of school and working—especially just before tests.

- You panic as time runs out during a test.

- You postpone studying for exams



Fear and Trembling at Exam Time

until the last possible moment, because studying only reminds you how much you have yet to learn.

If you are having problems studying or taking tests, you should seek help from your campus counseling center. Don't waste valuable time trying to study harder; if test anxiety is your problem, more studying won't help.

Putting Your Anxiety To Rest

The most popular technique for easing test anxiety is called "systematic desensitization." This is a form of behavior modification originally developed by Dr. Joseph Wolpe, a psychiatrist at Temple University, to treat phobias.

Desensitization helps students unlearn a destructive behavior pattern and replace it with a constructive and beneficial one—or in this case to replace their anxiety reactions with relaxation and calm.

The program consists of three steps: the first step is learning to relax deeply and completely; next, through "hierarchy construction" and desensitization itself, students are taught to reproduce deep relaxation in situations that normally arouse anxiety.

The first step, muscle relaxation, is effective for the simple reason that a person cannot have incompatible responses occurring simultaneously. You cannot be tense and relaxed at the same time.

This step involves isometric-like tensing of muscle groups (biceps, shoulders, chest) followed by relaxation of these same groups. Another part of the relaxation training is rhythmic breathing: taking slow, deep breaths helps replace tension with feelings of calm and control. All of these exercises demonstrate the contrast between tension and relaxation, making students more aware of physical tensions and better able to defuse tension before it builds up.

Once the student can successfully relax his muscles at will, he is ready for the next step: learning to deal with conditions which trigger feelings of anxiety.

The student is instructed to use his relaxation skills while a threatening

continued on page 20

SPORTS

IM Basketball Standings

A 1 Independent		B 5		C 8	
Team	W L	Team	W L	Team	W L
Medel's Mutants	6 2	ATQ-B	3 0	Economics	3 0
The "Macks"	6 2	QAX Orgy	2 0	XFCI	3 1
Economics	5 3	QX B	3 1	QAX Outhouse	2 1
Mechanical Eng	4 3	Dorkatrons	1 1	Vigilantes C2	2 1
B-Ball Team	4 4	Tong Xue Hui	1 3	English House	1 3
Sloan "A"	1 5	NRSA B	1 3	BQII "C"	0 2
Second West	1 8	PIA "B"	0 3	Korean Stds.	0 3
A 1 Living Group		B 6		C 7	
Team	W L	Team	W L	Team	W L
AT "A"	6 1	Team	2 0	SXC	3 0
AT "A"	6 2	Nodules	2 0	SFE C1	2 0
Fiji "A"	5 3	KX "Ball. Hdlrs."	3 1	ATA "GRRR"	2 1
Baker Bullets	4 3	SX B	2 1	AT "C"	1 1
MacGregor	2 6	BBEB	3 2	ATA "C"	1 2
The Bojacks	0 8	Fiji B	1 2	AXA "C"	0 2
A 2 Living Group		B 7		C 8	
Team	W L	Team	W L	Team	W L
SAE "A"	6 0	Coalition	0 3	1st	3 0
AXA "A"	5 2	C 1		Wis	3 0
AXE "A"	4 2	Team		Day	2 0
2001	3 4	4th West	3 1	PIA	1 1
AEP	2 4	EO "Snakes"	3 1	EO	1 1
Chocolate City	2 5	HoJo	3 1	EO	1 1
PIA "XTC"	1 6	Burton 1C	2 1	NR	1 1
B 1		Sick Puppies	1 2	C 9	
Team	W L	Phi Kappa	0 3	Team	
Phi Kappa	5 1	Coalition	0 3	Con	3 0
Burton Fives	4 2	C 2		Sec	3 0
From A to B	4 2	Team		Phi	3 0
Nuclear Eng	3 3	Air Force ROTC	5 0	Phi	3 0
Vigilantes "B"	2 3	Les Tares	3 2	Phi	3 0
BQII "A"	1 2	Vigilantes C1	3 2	Phi	3 0
PIKA	1 4	E. Prus. Blue Boys	2 3	Phi	3 0
Ashdown	1 4	7W Enforcers	2 3	Phi	3 0
B 2		XM1 Sports	0 5	Phi	3 0
Team	W L	C 3		Phi	3 0
Transports	4 0	Team		Phi	3 0
Chokin' Tokers I	4 2	Chinese Stds	4 0	Phi	3 0
System Dynamics	3 3	AXA	3 1	Phi	3 0
Hydros 2	2 2	Mallards	2 2	Phi	3 0
TEP "S & D's"	2 3	Phi X C	2 2	Phi	3 0
Mac C	2 4	Nudes Inc	1 3	Phi	3 0
N House V & II	2 4	K-Entry Killers	0 4	Phi	3 0
SAE Bouncers	1 2	C 4		Phi	3 0
B 3		Team		Phi	3 0
Team	W L	Team		Phi	3 0
BTB	3 0	Theta	4 0	Phi	3 0
Hydros I	3 1	Hillel Macabees	2 0	Phi	3 0
Phi "B"	2 1	Tetazoo	2 1	Phi	3 0
The Filters	2 2	B M F's II	2 2	Phi	3 0
Datamen	1 3	Phi Celtics	1 2	Phi	3 0
Club Latino	1 3	MacGregor E	1 3	Phi	3 0
New III Stooges	1 3	Sp Inquisition	0 4	Phi	3 0
B 4		C 5		Phi	3 0
Team	W L	Team		Phi	3 0
SAE B1	4 0	Thunderbolts	4 0	Phi	3 0
Did We Play	3 1	Tn City Tycoons	4 1	Phi	3 0
Sloan B	3 1	Aero-Astro	4 2	Phi	3 0
Abusers	3 2	Burton 5 Smokers	2 2	Phi	3 0
AEP	2 3	B M F's I	2 3	Phi	3 0
LSD	1 2	Baker WPOD	0 4	Phi	3 0
Chem Eng	1 3	Roaches	0 4	Phi	3 0
Burton H. Tooley	0 5			Phi	3 0

Fencing hopes to improve

By Jeanette Wing
(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)
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Reservations: 253-4720

Persons interested in these seminars should contact Steve Raudenbush or John Terry at x3-5126. Openings are limited. The education seminars will meet Thurs 3-4:30 in Room 20C-06.

All three courses will be graded on a pass/fail basis. Carry with them 12 MIT units.

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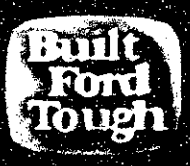
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93 out of 100 of all Ford Trucks registered over the last 12 years are still on the job. (Based on data as of July 1, 1976.)

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IM Basketball Standings

A 1 Independent

Team	W	L
Medel's Mutants	6	2
The "Macks"	6	2
Economics	5	3
Mechanical Eng	4	3
B-Ball Team	4	4
Sloan 'A'	1	5
Second West	1	8

A 1 Living Group

Team	W	L
ΔT 'A'	6	1
ΔT Δ A	6	2
Fiji 'A'	5	3
Baker Bullets	4	3
MacGregor	2	6
The Bojacks	0	8

A 2 Living Group

Team	W	L
ΔAE 'A'	6	0
ΔXA 'A'	5	2
ΔKE 'A'	4	2
2001	3	4
AEΠ	2	4
Chocolate City	2	5
ΠΔΦ 'XTC'	1	6

B 1

Team	W	L
ΦKΣ 'B'	5	1
Burton Fives	4	2
From A to B	4	2
Nuclear Eng	3	3
Vigilantes 'B'	2	3
BΘΠ 'A'	1	2
ΠKA	1	4
Ashdown	1	4

B 2

Team	W	L
Transports	4	0
Chokin Tokers I	4	2
System Dynamics	3	3
Hydros 2	2	2
TEP S & D's	2	3
Mac C	2	4
N House V & II	2	4
ΔAE Bouncers	1	2

B 3

Team	W	L
BTB	3	0
Hydros I	3	1
ΣΦE 'B'	2	1
The Filters	2	2
Datamen	1	3
Club Latino	1	3
New III Stoggles	1	3

B 4

Team	W	L
ΔAE B1	4	0
Did We Play	3	1
Sloan B	3	1
Abusers	3	2
AEΠ	2	3
LSD	1	2
Chem Eng	1	3
Burton H Tooley	0	5

B 5

Team	W	L
ATQ-B	3	0
ΘΔX Orgy	2	0
OXB	3	1
Dorkatrons	1	1
Tong Xue Hui	1	3
NRSA B	1	3
ΠΔΦ 'B'	0	3

B 6

Team	W	L
Nodules	2	0
KΣ 'Ball Hdris'	3	1
ΣXB	2	1
ΦBE B	3	2
Fiji B	1	2
ΦΔΘ	1	2
B-lievers	0	4

C 1

Team	W	L
4th West	3	1
EQ 'Snakes'	3	1
HoJo	3	1
Burton 1C	2	1
Sick Puppies	1	2
ΦKΣ	0	3
Coalition	0	3

C 2

Team	W	L
Air Force ROTC	5	0
Les Tares	3	2
Vigilantes C1	3	2
E Prus Blue Boys	2	3
7W Enforcers	2	3
XM1 Sports	0	5

C 3

Team	W	L
Chinese Stds	4	0
ΔΔΦ	3	1
Mallards	2	2
ΘXC	2	2
Nudes Inc	1	3
K-Entry Killers	0	4

C 4

Team	W	L
ΘΣ	4	0
Hillel Macabees	2	0
Tetazoo	2	1
B M F s II	2	2
ΦK Celtics	1	2
MacGregor E	1	3
Sp Inquisition	0	4

C 5

Team	W	L
Thunderbolts	4	0
Tri City Tycoons	4	1
Aero-Astro	4	2
Burton 5 Smokers	2	2
B M F s I	2	3
Baker WPOD	0	4
Roaches	0	4

Fencing hopes to imp

By Jeanette Wing

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tacks that motionless. won the m bout, also co wins, scoring on feint-d Meredith B meet off with added another round. Julia ing more ca previous two tance and wa (Please

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image or cue is presented, such as: "You're taking your exam. As you're looking over the questions, you can feel the tension in the pit of your stomach. Your eyes are wandering around the room and your thoughts are jumping from place to place."

The group leader presents from 12 to 20 of these scenes, arranged in order from least tension-provoking to most tension-provoking. The first scene may be hearing about someone else who must take a test. The scenes progress to announcement of a test in your class in two weeks, studying for it, walking to the test site, seeing a question you don't know how to answer, seeing other people finish while you are still working, and finally talking it over with classmates afterwards.

In the final step of the program, students are exposed to the entire range of images, all the time exercising new-found powers of relaxation.

Those Nagging Doubts

Desensitization basically works by controlling the physical response to anxiety—muscle tension. Anxiety has mental and emotional responses as well, and some new treatment programs are appearing on college campuses which focus on the "worry" component of anxiety. (Most of these programs incorporate desensitiza-

tion into their sessions, too.)

One example is a "cognitive modification" program developed by Dr. Michael Weissberg, director of the counseling center at Grand Valley State College in Allendale, Michigan. Weissberg combines desensitization with "cognitive restructuring," a therapy which confronts and disarms irrational thoughts that feed anxiety.

Weissberg's program makes students aware of the thoughts and worries they are experiencing while taking tests and studying for them. Anxious students tend to worry about everything. They are quick to blame themselves when things go wrong. They often feel a strong need for others' approval, and link their performance with winning or losing that approval. They also tend to see grades and test scores as measures of their personal worth; doing badly means to them that they are worthless as persons. They fear that failure will bring dire consequences.

In Weissberg's program, students focus on their thoughts. The truth is separated from gross exaggeration, the rational from the irrational, the useful from the self-defeating. Then students are given "coping thoughts" they can use to counter irrational thoughts when they reappear.

"I think everybody has these kinds of irrational thoughts," says Weiss-

berg, "but a able to cope out coping build up the to be anxious more down-

Both dese restructuring, tive in red ingly, thou themselves and test s complete re unknown re students als A test-ansi with couns habits, howe proved stud

For every and especial test anxiety suggestions yourself to c 1. Learn your reason fearful attit harmful anx

2. Do not tions just b from people

3. Get to few minutes head and thir

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Jeanette Wing '78
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ntributing three total
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nce '78 started the
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Shimaoka '80, fenc-
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turn to page 11)

t majority of people are
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nsitization and cognitive
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Dr. Suinn has some
on how you can help
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to be comfortable with
able anxiety. If you have a
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schedule stressful situa-
efore exams. Stay away
who irritate you.

the examination place a
early: relax, clear your
nk calm, relaxing thoughts.
someone who settles you
as you feel good about

r sleep, you will wake up
n do it with both eyes

ams are behavior prac-
ding to Garfield. "And
e practicing behavior of
d conquer," we are prac-
g with a real-life situa-

r dream, you feel guilty
ing Biology 202, per-
neglecting something
ortant in waking life. If
"F" in a dream bothers
urself what you're wor-
ailing in real life.

time you have an exam
don't panic and run for
exit. Face the test. Cope
aps in your dream you
with the teacher to take
er. Or have someone
ugh the door to tell you it
ribble mistake, and you
o take the test after all. If
r mind to it, your dream
appy ending.

n you wake up, think
the dream was trying to
e late, late show in your
give you an interesting
on your daily life.

Sooner or later it happens. The professor announces, "There will be no final exam." You smile. He adds, "Instead, prepare a 16-page paper—on a topic of your choosing." Your smile dissolves.

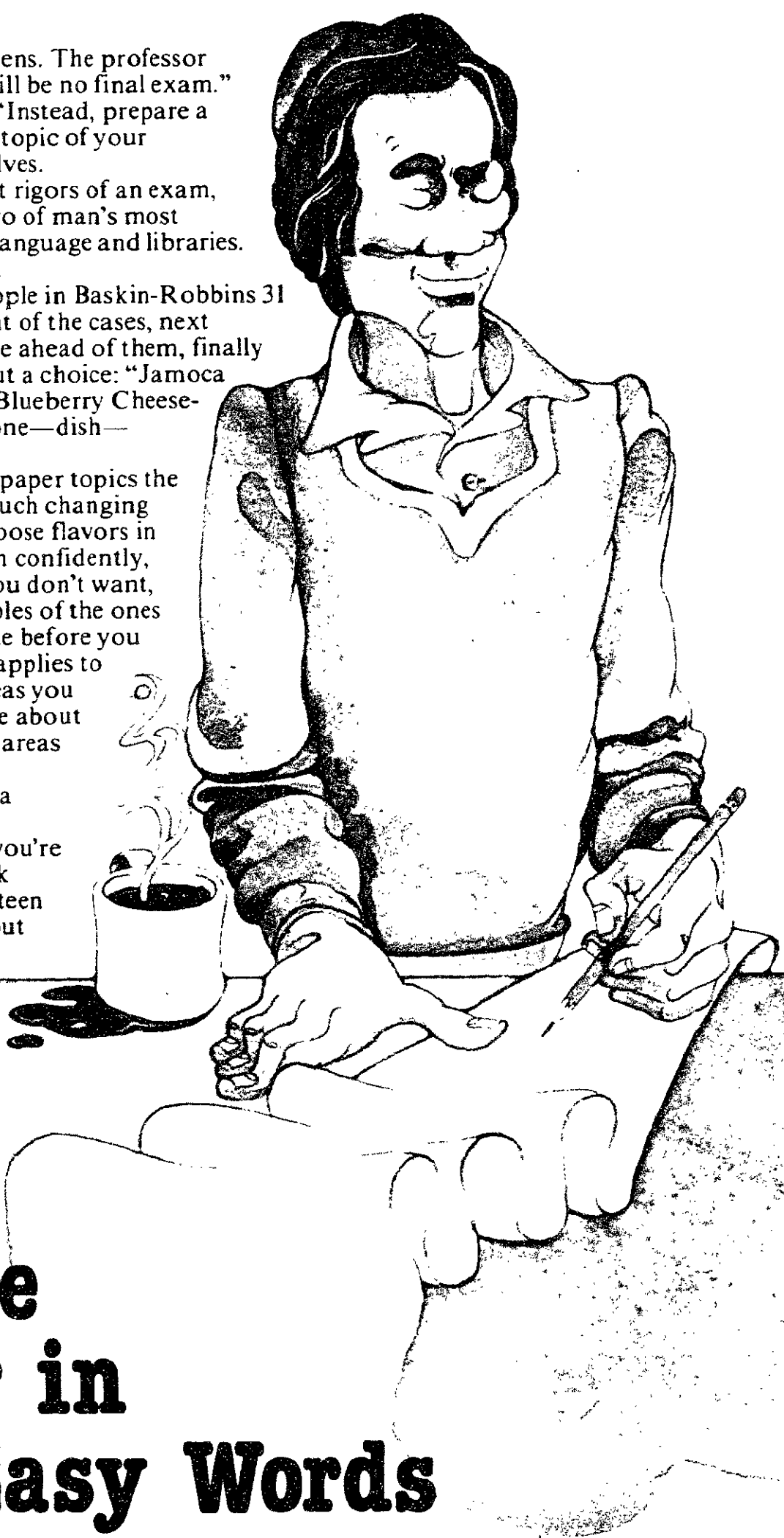
You sit, denied the modest rigors of an exam, asked instead to confront two of man's most intimidating achievements: language and libraries. On a topic of your choosing.

Choosing. Ever watch people in Baskin-Robbins 31 Flavors? First pacing in front of the cases, next urging their friends to choose ahead of them, finally in almost a panic blurting out a choice: "Jamoca Almond Fudge with—uh—Blueberry Cheese-cake—no—Pistachio in a cone—dish—cone."

Most people choose term paper topics the same way, in a panic with much changing of mind. The best way to choose flavors in Baskin-Robbins is to walk in confidently, rule out *firmsly* the flavors you don't want, and then demand taste samples of the ones you think you do want. Taste before you choose. The same principle applies to term papers: rule out the areas you definitely don't want to write about and then read around in the areas you are interested in before choosing. Take time to find a topic you will like.

Limiting. When you feel you're getting close to a topic, think narrow—really narrow. Sixteen pages may sound like a lot but it's less than most *Sports*

How To Write a Paper in 1,000 Easy Words



Sports

IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The Macks	6	2	ΘΔΧ Orgy	2	0	XΦC1	3	1
Economics	5	3	OX B	3	1	ΘΔΧ Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan 'A'	1	5	NRSA B	1	3	BΘΠ "C"	0	2
Second West	1	8	ΠΔΦ "B"	0	3	Korean Stds	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔΤ "A"	6	1	Nodules	2	0	ΣΧC	3	0
ΔΤΔ "A"	6	2	ΚΣ "Ball Hdris	3	1	ΣΦEC1	2	0
Fiji "A"	5	3	ΣΧB	2	1	ΔΤΔ "GRRR"	2	1
Baker Bullets	4	3	ΦBE B	3	2	Fiji	1	1
MacGregor	2	6	Fiji B	1	2	ΔΤ "C"	1	2
The Bojacks	0	8	ΦΔΘ	1	2	ΔΧA "C"	0	2
A 2 Living Group			B 7			C 8		
Team	W	L	Team	W	L	Team	W	L
ΣAE "A"	6	0	ΦΔΘ	0	4	1st E Redneck	3	0
ΔΧA "A"	5	2	C 1			C 9		
ΔKE "A"	4	2	Team	W	L	Team	W	L
2001	3	4	4th West	3	1	ΣAE "A"	6	0
ΑΕΠ	2	4	ΕΘ "Snakes"	3	1	ΔΧA "A"	5	2
Chocolate City	2	5	HoJo	3	1	ΔKE "A"	4	2
ΠΔΦ "XTC"	1	6	Burton 1C	2	1	2001	3	4
B 1			Sick Puppies	1	2	ΑΕΠ	2	4
Team	W	L	ΦKΣ	0	3	Chocolate City	2	5
ΦKΣ "B"	5	1	Coalition	0	3	ΠΔΦ "XTC"	1	6
Burton Fives	4	2	C 2			B 2		
From A to B	4	2	Team	W	L	Team	W	L
Nuclear Eng	3	3	Air Force ROTC	5	0	Transports	4	0
Vigilantes "B"	2	3	Les Tares	3	2	Chokin' Tokers I	4	2
BΘΠ "A"	1	2	Vigilantes C1	3	2	System Dynamics	3	3
ΠKA	1	4	E Plus Blue Boys	2	3	Hydros 2	2	2
Asndown	1	4	7W Enforcers	2	3	ΤΕΦ S & Ds	2	3
B 2			XM1 Sports	0	5	Mac C	2	4
Team	W	L	C 3			N House V&J	2	4
Transports	4	0	Team	W	L	ΣAE Bouncers	1	2
Chokin' Tokers I	4	2	Chinese Stds	4	0	B 3		
System Dynamics	3	3	ΑΔΦ	3	1	Team	W	L
Hydros 2	2	2	Mallards	2	2	BTB	3	0
ΤΕΦ S & Ds	2	3	OX C	2	2	Hydros I	3	1
Mac C	2	4	Nudes Inc.	1	3	ΣΦE "B"	2	1
N House V&J	2	4	K-Entry Killers	0	4	The Filters	2	2
ΣAE Bouncers	1	2	C 4			Datamen	1	3
B 3			Team	W	L	Club Latino	1	3
Team	W	L	BTB	3	0	New III Stooges	1	3
BTB	3	0	ΘE	4	0	B 4		
Hydros I	3	1	Hillel Macabees	2	0	Team	W	L
ΣΦE "B"	2	1	Tetazoo	2	1	ΣAE B1	4	0
The Filters	2	2	B M F's II	2	2	Did We Play	3	1
Datamen	1	3	ΦK Celtics	1	2	Sloan B	3	1
Club Latino	1	3	MacGregor E	1	3	Abusers	3	2
New III Stooges	1	3	Sp. Inquisition	0	4	ΑΕΠ	2	3
B 4			C 5			LSD	1	2
Team	W	L	Team	W	L	Chem Eng	1	3
ΣAE B1	4	0	Thunderbolts	4	0	Burton H Today	0	5
Did We Play	3	1	Tri City Tycoons	4	1	C 6		
Sloan B	3	1	Aero-Astro	4	2	Team	W	L
Abusers	3	2	Burton 5 Smokers	2	2	ΣAE B1	4	0
ΑΕΠ	2	3	B M F's I	2	3	Did We Play	3	1
LSD	1	2	Baker WPOD	0	4	Sloan B	3	1
Chem Eng	1	3	Roaches	0	4	Abusers	3	2
Burton H Today	0	5				ΑΕΠ	2	3

Fencing hopes to improv

By Jeanette Wing
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(Please turn to page 1)

Illustrated articles. Last summer the article "Make Way for the Sultan of Swipes" (August 22, pp. 24-30) had about 3,900 words in it. This is nearly as long as your 16-page paper, yet the topic of the *Sports Illustrated* article was very narrow: one man, Lou Brock; one achievement, base-stealing.

Most students tend to write on topics too broad for the length assigned. Writing your paper will be easier if, before you begin, you zero in on one tiny aspect of a subject and stick to exploring that. Write about the history of one slang expression, not the history of slang. Explore the development of one rock musician, not the evolution of rock. Consider the consequences of one biology experiment, not the whole DNA issue. Then ask yourself if you've limited the topic enough.

Limiting is probably the most important thinking task facing you. Writers can never say all there is to say about a topic and must force themselves to leave out some good material. Take this topic. There's no room for the story about the legendary dangling modifier or for a discussion of stylistic devices. In fact, there's not even room for the topic. Although the assigned topic was "how to write a paper," the assigned length was only 1,000 words. The library had 13 shelves of books on writing. The six books selected as sources for the article had 2,192 pages total—not counting indexes. The word "limiting" hardly describes what was done to squeeze 2,192 pages into 1,000 words.

Research. At this point in how-to-write-a-paper articles, it is customary to advise students to approach reference librarians and ask for their willing help. It's time someone warned you about the ego-thrashing you can get from otherwise well-meaning reference librarians whose every gesture,

Your Term Paper Mission

Term papers are written for an audience of one—the professor. As you sit down to write, think of your audience and take pity. Your teacher would probably rather spend his nights doing something more creative. Instead, this sentinel of academe must sift through reams of white bond paper, hundreds of thousands of black typewritten characters in double-spaced lines blurring together. Your assignment: to write a paper that stands out from the rest and says, "The rest may be incoherent drivel, but I'm different. I'm going to at least make you evening bearable."

every smile seems to be saying, "You dummy, you mean you don't know about *Bacon's Publicity Checker*, the ERIC Clearinghouse, the *Miscellany of Popular Antiquities*, *Topicator* or the National Union Catalog?"

Reference librarians don't mean to make you feel stupid, but they can. So swallow your ego and throw yourself at their mercy. Or look it up yourself: basic books like Shore's *Basic Reference Sources*; Bates' *Guide to Use of Books and Libraries*; Murphy's *How and Where to Look It Up*; and Winchell's *Guide to Reference Books* are all helpful reference book references.

Organizing. Another custom of how-to-write-papers articles is to stress the importance of the outline in preparing a paper. This is true. Outlines are important, but they're useless unless you understand why you're doing one. The why of outlines has to do with William Randolph Hearst's formula for writing.

His formula (roughly) was as follows: "First you tells folks what you're gonna tell 'em; then you tells 'em; then

you tells 'em what you're writing, the easiest approach: announce your topic, present which flesh out your point (thesis), then wrap it all up, reminding people what it has been. An outline helps you to do this. A paper is beginning, middle and end, understood by readers.

A short paper—say 1,000 words—may not need as much as a longer one since there's less time for a reader to get confused. But with a longer reader needs help from the beginning. A beginning tells folks, a middle what 'em again, and an ending tells 'em yet again, is only

Language. The trouble with the Hearst formula is that the paper will be a phrase "This paper is about an identical sentence amended. This is dull. All writing is scary. Approach and choosing a topic is enough. But wrestling with often squashes any zest, bringing to writing. Anybody happily on a phone (speaking maybe 3,000 words). But when asked the same number of words jauntily telephonist becomes a perpetrator of "This paper sentences—in a word. Because written language and Rules kill all the fun you Self-Conscious.

Try not to be hamstrung. Your ear knows more than your eye. Remember the old high school aboo about sentence fragments again at the third paragraph. Every sentence fragment, but your ear accepted that. Fragments ironclad taboo, and any mar book will say so (in fragments that offend wrong, but musical fragments stress or color are acceptable formal writing.

Let your ear do the fragments, dangling clauses most of your rhetorical probably cure themselves paper aloud, listen to your write. Thinking of language will not only improve you but also make your writing you feel you need a greater standing of language, read text sometime leisurely, not writing a paper. But writing, set aside self-criticism and simply tell people what to say. On a topic of your course.

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Famous Failures

Six Convincing Examples That Grades Aren't Everything

by LISA GREENBERG

Education is replete with examples of people who failed academically in one way or another but who achieved excellence and recognition nonetheless. So when your next paper is returned pulsating with four different colors of ink and you fail miserably on a midterm, console yourself with these anecdotes.



Comic Relief

Woody Allen claims he never did a lick of homework. He spent all his spare time writing jokes. This artistic dedication went unappreciated by his teachers, who called his parents to school so often his former classmates still recognize them on the street.

The homely comic attended both New York University and City College of New York, but was quickly kicked out of both schools.

"I never actually failed a college course," Allen has said. "It was always a very indefinite 'D.'"



Thrown Out With Style

Buckminster Fuller would have been a fifth-generation Harvard man had he graduated. But he soon grew to loathe the closed social systems of

the ivy-covered institution.

Fuller wanted to leave the university, but with style. Merely flunking out or withdrawing would have been too mundane.

While his classmates sweated over midyear exams, Fuller left for New York with his tuition money. He attracted the attention of several Ziegfeld showgirls by sending champagne and flowers to their dressing room, and treated the ladies to a lavish dinner that far exceeded the price of tuition. When word of his exploits and unpaid bills reached Harvard, Fuller was promptly expelled for "irresponsible conduct."



Easy Essays

Essay exams may have gotten *Washington Post* reporter Carl Bernstein through high school. He was a terrible student in everything but English.

"The only thing I could do was write," he once said. "I'd pass the essay exams and flunk the true-false."

Bernstein, who broke the Watergate story along with *Post* reporter Bob Woodward, rated homework low in priority. At 16 he spent all his free time working as a copyboy in

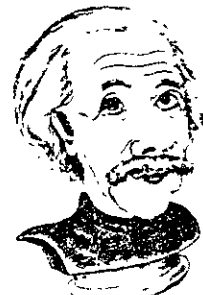
the *Washington Star* newsroom, waiting eagerly for even the smallest writing assignment to come his way.



Remedial English

Sir Winston Churchill, famous for his eloquent oratory, did not always have an impressive command of the English language. The late British prime minister flunked grammar in primary school. He credited his later mastery of the tongue to the help of an excellent remedial English teacher.

Churchill also had trouble passing his army entrance exam. Aided by a mathematics "crammer" (tutor), the late statesman passed the test on his third try.



Rebellious Attitude

Albert Einstein hated high school and was asked to leave because his "rebellious attitude" had a negative effect on other students.

The independent thinker

found it meaningless to memorize facts and grammar rules, so he lagged behind his classmates in most subjects. But he was light-years ahead of them in math.

After dropping out of high school, Einstein applied to a technical university. But he flunked the entrance exam, doing badly in everything but math. University officials suggested he attend a less confining high school where he could brush up on other subjects. Upon graduation from this school, Einstein was automatically admitted to the university.



A Late Bloomer

Some great thinkers get off to an early start. Others, such as business philosopher Peter Drucker, are more subtle about revealing their mental talents.

Drucker was a painfully slow learner in primary school. His third grade teacher found him especially frustrating and announced to the class one day: "Peter Drucker is both stupid and lazy."

Today, Drucker is a popular lecturer and consultant, as well as the author of 10 highly respected books on business, management and economics.

He once said he is glad his frustrated third grade teacher had to keep him in class. "Today the same teacher could move the child to a slow track," he said. "Once you are in that slow track you don't get out."

Lisa Greenberg hasn't failed anything yet except her first driving test.

sports

IM Basketball Standings

A 1 Independent			B 5			C 6		
Team	W	L	Team	W	L	Team	W	L
Medel's Mutants	6	2	ATQ-B	3	0	Economics	3	0
The "Macks"	6	2	QXX Orgy	2	0	XFC1	3	1
Economics	5	3	QX B	3	1	QXX Outhouse	2	1
Mechanical Eng	4	3	Dorkatrons	1	1	Vigilantes C2	2	1
B-Ball Team	4	4	Tong Xue Hui	1	3	English House	1	3
Sloan A	1	5	NRSA B	1	3	BOP "C"	0	2
Second West	1	8	IIAΦ "B"	0	3	Korean Stds.	0	3
A 1 Living Group			B 6			C 7		
Team	W	L	Team	W	L	Team	W	L
ΔT "A"	6	1	Nodules	2	0	SXC	3	0
ΔTΔ "A"	6	2	KΣ "Ball Hdlrs"	3	1	ΣΦEC1	2	0
Fiji A	5	3	SX B	2	1	ΔTΔ "GRRR"	2	1
Baker Bullets	4	3	ΦBE B	3	2	Fiji "C"	1	1
MacGregor	2	6	Fiji B	1	2	ΔT "C"	1	2
The Bojacks	0	8	ΦΔΘ	1	2	ΔXA "C"	0	2
A 2 Living Group			B 7			C 8		
Team	W	L	Team	W	L	Team	W	L
SAE A"	6	0	C 1	3	1	Te	1	2
ΔXA A"	5	2	Team	3	1	W	3	0
ΔKE A"	4	2	4th West	3	1	D	2	0
2001	3	4	EO "Snakes"	3	1	II	2	1
AEH	2	4	HoJo	3	1	E	1	1
Chocolate City	2	5	Burton 1C	2	1	Φ	1	2
IIAΦ "XTC"	1	6	Sick Puppies	1	2	NI	0	2
B 1			C 2			C 9		
Team	W	L	Team	W	L	Team	W	L
ΦKΣ B	5	1	Air Force ROTC	5	0	Te	3	0
Burton Fives	4	2	Les Tares	3	2	Cc	3	0
From A to B	4	2	Vigilantes C1	3	2	Se	2	0
Nuclear Eng	3	3	E Prus Blue Boys	2	3	X	2	1
Vigilantes B	2	3	7W Enforcers	2	3	Ja	1	1
BOP A	1	2	XM1 Sports	0	5	C	1	2
HKA	1	4				Te	0	3
Ashdown	1	4				An	0	3
B 2			C 3			C 10		
Team	W	L	Team	W	L	Team	W	L
Transports	4	0	Chinese Stds	4	0	AI	3	0
Chokin Tokers I	4	2	ΔΔΦ	3	1	ΣΔ	2	0
System Dynamics	3	3	Maliards	2	2	B	2	1
Hydros 2	2	2	ΦXC	2	2	K	2	1
TtΦ S & D	2	3	Nudes Inc	1	3	Le	2	1
Mac C	2	4	K-Entry Killers	0	4	C	2	2
N House V & II	2	4				D	2	2
ΣAE Bouncers	1	2				Te	2	2
B 3			C 4			C 11		
Team	W	L	Team	W	L	Team	W	L
BTB	3	0	QZ	4	0	TV	2	0
Hydros I	3	1	Hillel Macabees	2	0	Vig	2	0
ΣΦE B	2	1	Tetazoo	2	1	Mc	2	0
The Filters	2	2	B M F s II	2	2	N	2	0
Datanien	1	3	ΦK Celtics	1	2	Ch	2	0
Club Latino	1	3	MacGregor E	1	3	D	2	0
New III Stooges	1	3	Sp Inquisition	0	4	Te	2	0
B 4			C 5			C 12		
Team	W	L	Team	W	L	Team	W	L
ΣAEB1	4	0	Thunderbolts	4	0	Te	2	0
Did We Play	3	1	Tn City Tycoons	4	1	Bur	2	0
Sloan B	3	1	Aero-Astro	4	2	Chc	2	0
Abusers	3	2	Burton 5 Smokers	2	2	Var	2	0
AEH	2	3	B M F s I	2	3	Bur	2	0
LSD	1	2	Baker WPOD	0	4	2nc	2	0
Chem Eng	1	3	Roaches	0	4	The	2	0
Burton H Tooley	0	5						

Fencing hopes to improve

By Jeanette Wing
(Jeanette Wing '79 is a member of the MIT Women's Fencing team.)

Struggling to maintain a winning record has never been a problem for the MIT Women's Varsity Fencing Team (4-3) until this year. After a 13-3 loss to rival Radcliffe temporarily halted the team's winning (2-1) record of last December, MIT routed Concord-Carlisle 12-4 on January 11 for the second time in the team's

Following this victory the women split last weekend's meets, with a close defeat to Dartmouth 10-6 to again tie the win-loss record, and a comeback victory against SMU 9-7 to give the team a winning edge in the season record.

Saturday, SMU's weaker women were no match for the quicker and more aggressive MIT team. Captain Michelle Pretymann '79 won all three of her

tacks that left her opponents motionless. Jeanette Wing '78 won the meet's ninth deciding bout, also contributing three total wins, scoring most of her touches on feint-disengage attacks. Meredith Boice '78 started the meet off with a bout win 5-1 and added another win in the next round. Julia Shimaoka '80, fencing more carefully than in her previous two bouts, kept her distance and watched for her oppo-

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